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# ENERGY SOURCES IN CANADA COMMODITY STATEMENTS FOR 1926, 1929, 1933 AND 1939

Reference Paper No. 74

DOMINION BUREAU OF STATISTICS

Industry and Merchandising Division



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## ENERGY SOURCES IN CANADA COMMODITY STATEMENTS FOR 1926, 1929, 1933 AND 1939

Reference Paper No. 74

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#### **GENERAL PUBLICATIONS ON ENERGY**

The following publications can be obtained either from the Information Services Division, Dominion Bureau of Statistics, Ottawa, or from the Queen's Printer, Ottawa. Orders should be accompanied by a cheque or money order payable to the Receiver General of Canada.

Reference Paper Number 69, Energy Sources in Canada; Commodity Accounts for 1948 and 1952. (\$1.00)

Reference Paper Number 73, Energy Consumption in the Manufacturing and Mining Industries of Canada, Selected Years 1926-1953. (\$1.00)

Reference Paper Number 74; Energy Sources in Canada; Commodity Statements for 1926, 1929, 1933 and 1939. (\$1.00)

#### **FOREWORD**

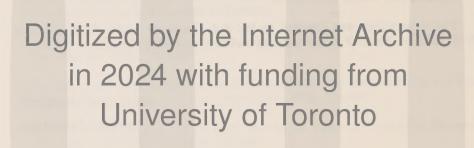
This research memorandum presents the results of a study of the available statistics on fuel and energy for the years 1926, 1929, 1933 and 1939. It was prepared in close co-operation with the Technical Sub-Committee of the Interdepartmental Committee on Energy.

It forms part of a series of publications on energy, and carries back to earlier years the work begun with Energy Sources in Canada; Commodity Accounts for 1948 and 1952. Further details on some aspects of the subject have been given in Energy Consumption in the Manufacturing and Mining Industries of Canada, Selected Years, 1926-1953.

The memorandum was prepared by Mr. R.J. Loosmore, under the direction of Mr. H. McLeod, Director of the Industry and Merchandising Division.

WALTER E. DUFFETT,

Dominion Statistician.



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## ENERGY SOURCES IN CANADA COMMODITY STATEMENTS FOR 1926, 1929, 1933 AND 1939

#### INTRODUCTION

The purpose of this memorandum is to facilitate study of the pattern of growth of energy consumption in Canada, by bringing together the available statistical material for four selected years, and assembling it into a unified presentation.

The method of approach used was the same as for the earlier publication, Energy Sources in Canada; Commodity Accounts for 1948 and 1952\(^1\). For each commodity or group of commodities concerned, a statement was prepared for each year, showing the supply currently available in Canada and the amount of consumption that was measured. In some cases the balance was close enough to justify the description of these tables as "commodity accounts". Where statistical cover on the supply side was too low to justify that expression, the term "commodity statement" is used.

These statements for individual commodities were then consolidated into tables showing the supply and distribution of energy sources in Canada. Tables 1 to 4 cover the years 1926, 1929, 1933 and 1939. Conversion of the fuels and electricity into their equivalent in terms of British thermal units made it possible to add up all energy sources, where this could be done without double-counting. Tables 9 to 12 show these results.

When reading this memorandum, it is necessary to bear in mind the distinction between energy sources used and energy effectively applied. For instance, when a steam engine is in operation, the energy source used consists of the coal which is stoked into the boiler. The energy effectively applied is the amount of force exerted by the driving shaft of the engine. The potential energy in the coal is not all effectively applied. Some heat, for instance, goes up the chimney, while other energy is used in overcoming friction within the engine. When an oil furnace is used for heating a home, the energy input consists of the potential energy in the oil burned. The energy effectively applied is the amount of heat used for heating the home, as distinct from heat going up the chimney.

The efficiency of a fuel in producing mechanical energy varies with the type of prime mover which it powers. Burning a fuel in such a way that the gas generated is applied directly to the prime mover, as in an internal combustion engine or in a gas turbine, is, in general, more efficient than using it to raise

steam for a steam engine. Steam turbines are, in general, more efficient than steam reciprocating engines in which the steam drives pistons. The energy source which can be most effectively applied is electricity, since it is itself a type of energy.

In Canada, running water provides a very important supply of energy. The water-power which was used to generate electricity is covered by this memorandum. Water-power used directly, as for driving a machine by means of a turbine, is not covered because the relevant data are not available. However, this latter type of use is not quantitatively very important.

The available statistics on distribution cover the **input of energy sources** only. They range over such items as coal burned in factories, crude oil used in petroleum refineries, gasoline used in motor vehicles, and electricity used for street lighting. They do not measure energy effectively applied.

For this reason, the consolidated tables based on British thermal units (tables 9 to 12) should be interpreted with care. They do not relate to energy effectively applied. In terms of work actually done, for instance, electricity is far more important than it is in terms of potential energy.

#### **Methods Used**

The fuels covered consist of all the major ones used in Canada. A few minor items, such as peat, candles, and charcoal were excluded. The principle behind the choice of commodity groups for which statistics were to be presented was that of giving the highest degree of detail consistent with the concepts used. The choice therefore depended on the nature of the statistics already in existence, Gasoline and naphtha, for instance, were combined because export statistics do not exist for them separately. The commodities and commodity groups covered are as follows:

Crude petroleum (including casing-head gasoline)
Natural gas
Coke (other than petroleum and pitch coke)
Petroleum coke
Manufactured gas (excluding blast furnace gas)
Liquefied petroleum gases
Gasoline and naphtha
Other petroleum fuels
Fuelwood and wood waste useable as fuel
Electricity

The detailed statements for these commodities are presented as tables 17 to 53. Notes on the material in these tables are given in the appendix. For

<sup>1.</sup> Reference Paper No. 69, price \$1.00. For additional information on the use of energy by manufacturers and mines, see Reference Paper No. 73, Energy Consumption in the Manufacturing and Mining Industries of Canada, Selected Years 1926 to 1953, Price \$1.00.

some years, it was necessary to merge commodity groups, owing to the nature of the available statistics. Natural and manufactured gas had to be merged for 1926 because data on industrial use were not available separately. All types of coke had to be combined for 1926 and 1929 for the same reason.

The concepts used in these tables are as follows. On the supply side, the available supply in Canada is taken to be production within the country, plus the excess of imports over exports, plus the excess of withdrawals from stocks over new stocks laid down.

On the distribution side, the use of fuel or power by establishments producing fuel or electricity has been stated separately from other uses. This was done in order to make it easier to compute a net figure for the use of fuel and electricity, in the composite tables. For instance, the available supply of coal includes coal used in producing the available supply of electricity, which includes electricity used in producing coal. The elimination of fuel and electricity used in the energy-producing sector takes out this double-counting 1,2.

The use of fuel outside the energy-producing sector is broken down by significant sectors. Naturally, the detail varies from table to table, and there may be conceptual differences between the corresponding items of different tables. For instance, although the use of fuel would ideally be given, it has been necessary in some cases to use figures for purchases by the end users, or of deliveries to them.

The tables contain standardized reference letters for individual items. The items bearing the same reference letter in different tables are equivalent either precisely or closely. It is necessary to read the description after the letter, before complete comparability can be assumed. Every item which appears in any of the commodity accounts or statements is explained in the appendix.

Standardization on the supply side proved more successful than on the distribution side of the accounts. Production was taken from Census of Industry data, except in the case of electricity where the data came from an equivalent survey, and crude petroleum and natural gas where the data were from provincial sources on a comparable basis. Imports for consumption and exports (including re-exports)

are as published in *Trade of Canada*, except for the export of natural gas in 1933 and 1939 where another source was used, and for coal.

In the case of coal, landed imports were used instead of imports for consumption in order to maintain as much consistency as possible with the series published for 1948 and 1952. For these years, landed imports were used instead of imports for consumption because the inventory data included stocks of coal held in bonded warehouses. For the four years covered in this memorandum, no inventory data were available, so an adjustment was made on the supply side by giving an imputed figure for the decrease of stocks held in bond. This was taken as the excess of imports for consumption over landed imports (negative when the landed imports were greater). Inventory data were scarce before 1939, and incomplete during that year. However, the study for 1948 and 1952 showed that inventory changes amounted to a small percentage of the available supply during those years. Errors due to the omission of inventory changes for the years covered in this memorandum are not, therefore, likely to be of major importance.

The unity achieved on the production side depended on two major surveys, which covered almost all the field and accounted for the major part of available supply. On the distribution side, the situation was different. The Census of Industry provided data annually for the use of fuel or electricity in the production of fuel, for the use of fuel commodities as raw materials, and for the use of fuel or electricity by manufacturers and mines. It was also the source of certain other items, including sales of coal by mines to their employees, and some types of waste. The annual census of central electric stations showed the use of fuel by these establishments, and other annual censuses showed consumption by railroads and ships.

For the rest, it was a case of filling in the gaps with information from other available surveys, which were mainly carried out on a commodity basis. In some cases, figures on deliveries had to be used instead of figures on actual consumption. On the whole, a reasonable degree of consistency exists for the main concepts involved. Cover on the distribution side was, however, often incomplete.

The concepts used are listed below, with a note on each item where required. The identification letters are repeated throughout the tables. There are some gaps in the list, where data for a concept used in the study for 1948 and 1952 were not available for the four years covered here. Every individual entry in a table is explained in the notes in the appendix.

(a) Production. Mainly from the Census of Industry. In the case of coal mining, an attempt has been made to get as close as possible to the amount of material actually extracted from the soil. If it is desired to exclude waste at the mine, this can be done by the user, since the necessary facts are given elsewhere in the table concerned. In the case of natural gas, data published

<sup>1.</sup> It has not all been eliminated because the electricity tables include current generated by manufacturers and mines for their own use. In so far as this was generated by steam, there is still double-counting between fuel used by industry, and the electricity supply. The Census of Industry schedules were revised for 1955, so as to find what proportion of industrial production of electricity is by steam, and what by water power.

<sup>2.</sup> An alternative approach to the elimination of double-counting would be to deduct only fuel used as a raw material in the production of other fuel. Thus, oil converted into petroleum products would be deducted, but oil burnt as a source of heat in a petroleum refinery would not be. The reader who wished to use such an approach could find the relevant data either in the main tables, or in the source material referred to in the appendix.

for 1948 and 1952 in Reference Paper Number 69 include waste gas at the wellhead. This approach could not be followed in the present publication, since the necessary facts are not available.

(b) Imports for consumption. As published in *Trade* of *Canada*. In the case of coal, an alternative series for landed imports was used.

(c) Exports (including re-exports)

(d) Net imports. This consists of (b)-(c).

(e) Stocks at beginning of year. All inventory data consist of a consolidation of the available figures.

(f) Stocks at end of year

- (g) Net decrease in stocks. This consists of (e)-(f). The net decrease was chosen because it represents a positive contribution to available supply. It will, of course, be negative when stocks rise. In the case of coal, an imputed figure was used.
- (h) Available domestic supply. This consists of (a)+(d)+(g). It represents the amount made available for consumption in Canada during the year, and would be equal to consumption in Canada if the statistics were perfect.

(i) (j) These letters were left as spares.

- (k) Used by employees of producers. In the case of coal, deliveries by mines to employees at lower prices.
- (m) Used in homes. Sales to household consumers, or deliveries for household use.
- (n) Commercial use. Deliveries for use by commercial consumers, such as shops.
- (p) Used for production of fuel or electricity

(pl) Coal mines

- (p2) Coal briquette plants at mines
- (p3) Natural gas industry

(p4) Oil wells

- (p5) Coke and gas. Includes fuel used, and coal used for conversion. These are stated separately.
- (p6) Petroleum refineries. Includes fuel used, and hydrocarbon materials used for conversion. Petroleum products industry is used as the title, where separate data for refineries are not available for 1926 and 1929.
- (p7) Central electric stations

(p8) Other

- (q) Used by manufacturing industry as raw material.

  This includes coke used in blast furnaces and steel furnaces, but excludes foundry coke used in cupolas.
- (r) Used by non-fuel producing manufacturers and mines, as fuel. Includes coke used in base metal smelters and foundry coke used in cupolas. It equals (s) + (t).
- (s) Used by non-fuel producing manufacturers, as fuel
- (t) Used by non-fuel producing mines, as fuel
  (u) Sub-total: used by non-fuel producing manufac-

turers and mines. This equals (q) + (r).

(v) Other uses. Classification used only for items not classifiable elsewhere, either because they cover a known range of uses, which cannot be broken down finely, or because they are a miscellaneous item.

- (w) Transportation
- (w1) Railroads
- (w3) Motor vehicles
- (w4) Ships
- (w5) Air carriers
- (w7) Line losses, electricity
- (x) Domestic consumption, net of waste. This equals (k) + (m) + (n) + (p) + (u) + (v) + (w).
- (y) Waste
- (z) Domestic consumption, including waste. This equals (x)+(y).

#### The Consolidated Tables

The standardization of the tables for individual commodities has facilitated the compilation of consolidated tables for the supply of, and demand for, energy in Canada. Such consolidations are presented as tables 1 to 4.

Each column shows the supply and distribution of one commodity or commodity group, and consists of a condensation of material from one of the tables 17 to 53. Explanations of individual items can be obtained from these tables, or the detailed notes on them.

Reading down each column, the composition of the supply available in Canada is first shown, broken down by production, net imports, and withdrawals from stocks. Next, use unaccounted for is taken out, to leave the total of use accounted for. Fuel used for the manufacture of other fuel or of electricity is then taken out, to leave the amount of fuel accounted for outside the energy-producing sector. This is broken down according to whether it was used as a raw material or as a fuel in one of several different sectors.

Tables 5 to 8 present the data as percentages of the apparent available supply. An analysis of some of the more significant ratios for the four years is given below. Changes in the quantity of Canadian production, and in the available supply, are examined in more detail later.

One problem which arose when preparing these percentage tables was that of incomplete cover. The tables for individual commodity groups (tables 17 to 53) give a summary of the available data but do not necessarily give full cover for the concepts stated. The same is true of the consolidated tables in terms of physical units (tables 1 to 4). Almost all of these data have been published before.

Further processing of the data, as has been done for tables 5 to 8, raises problems in the cases where cover is known to be incomplete. It is, for instance, of some interest to know that the disappearance of 189,934 tons of coal in 1926 was definitely attributable to household use. The fact that a good deal of the 10,758,745 tons unaccounted for also probably went in the same type of use does not detract from the usefulness of the figure as such, so long as its significance is understood. However,

if further processing is applied to this figure of measured disappearance, the risk of its being misquoted is increased.

When preparing tables 5 to 8, it was therefore considered preferable, in cases where cover was known to be incomplete, to present no percentage figure but instead to insert an explanatory footnote.

#### Conversion into British Thermal Units

Tables 9 to 12 consist of the data in tables 1 to 4, converted into British thermal units. As in the case of the percentage tables (tables 5 to 8), no figures are given where cover is known to be incomplete. The conversion factors used were as follows.

	Unit	Millions of B.t.u. per unit
Coal, anthracite	ton ton ton ton	26 27 19 16
Coke, petroleumother	ton ton	30.12 25
Oil, crude	imperial gallon	0.17
Gasoline and naphtha	imperial gallon	0.15
Liquefied petroleum gases	imperial gallon	0.1146
Other petroleum fuels	imperial gallon	0.17
Natural gas	thousand cubic feet	1
Manufactured gas	thousand cubic feet	0.5
Fuelwood	cord	20
Electricity	thousand k.w.h.	3.412

When assessing the significance of electricity, the basis of converting to a B.t.u. equivalent should be borne in mind. This publication uses a straight energy-equivalent basis. For some purposes, however, electricity is converted to a common unit on the basis of the equivalent amount of coal or other fuel which would be required to produce it, at current levels of operating efficiency. Such an approach gives a higher comparative value for electricity than the use of B.t.u. does. It is not necessarily better or worse than the approach adopted in this publication. For a long-run series, however, there is much to be said for a stable conversion factor.

When converting coal, the procedure adopted was to break down each item in tables 17 to 20 as finely as possible, and convert at the rate appropriate to the type of coal. This differed from the approach adopted for the years 1948 and 1952 in Reference Paper Number 69. In that case the coal accounts were broken down into subsidiary statements as an intermediate step. The nature of the data was such that satisfactory tables could only be made for three groups;—anthracite; lignite; bituminous and sub-bituminous. These tables were then

converted, the factor for bituminous coal being used for the whole bituminous and sub-bituminous group. This resulted in an upward bias for all items which consisted of sub-bituminous coal in addition to bituminous, whether or not the sub-bituminous coal was reported as such. Under the present technique, consumption still has an upward bias in cases where the use of sub-bituminous coal was reported as bituminous.

When converting coke (all types) for 1926 and 1929, the conversion factor for coke from coal was used for the entire amount. When converting gas (all types) for 1926, natural and manufactured gas were separated as far as possible, and converted at the appropriate rates. This covered the supply side of the statement, and some of the distribution side. Amounts which could not be identified separately were converted into B.t.u. by a weighted conversion factor 1.

A total for all items on each row is given whenever they can be added up without double-counting<sup>2</sup>. It is not possible to add the available supply of all items, nor their production, since some fuels are made from others. Coke, for instance, is made from coal or oil, and its energy value cannot be added to the total for theirs without double-counting. The available supply of primary fuels can, however, be added to give a significant total. Imports can be totalled because imported manufactured fuels, such as gasoline or coke, are not produced from oil or coal which forms part of the Canadian supply. The total for imports cannot, however, be added to the totals for other concepts.

So far as the consumption of fuel and electricity is concerned, use outside the energy-producing sector can be added up. For instance, the total for coal used outside that sector excludes the amounts used for producing coke, or electricity. The individual items of use outside the energy-producing sector can also be added up. There is still some double-counting involved, but it is slight. It arises because some of the fuel used by manufacturers and mines goes to generate electricity for use within the plants. What proportion of industrial generation of electricity is by steam, and what proportion by water power, is not known. However, in the early 1950's the whole amount was not much over a tenth of the total elec-

<sup>1.</sup> From the apparent available supply of natural gas was deducted the amount of use accounted for as such. This left a balance of 4,490,548 M cu. ft. not identified. The equivalent balance for manufactured gas was 25,407,421 M cu. ft. Thus 15.02 per cent of the total unidentified gas was natural, and the remainder manufactured. A weighted conversion factor of 0.5751 million B.t.u. per thousand cubic feet was therefore indicated.

<sup>2.</sup> The procedure of having a total column which applies to some rows of the table, but not to others, is admittedly unusual. However, the practice of keeping all the rows in does make for easy comparisons between the B.t.u. table for any year, and the other consolidated tables for that year. It is also necessary to know the non-additive items in order to see the relationship between the additive ones in each column.

tricity supply, and the steam generation was propably less than a twentieth of this total supply. Census of Industry questionnaires have been revised so as to provide for the elimination of this double-counting as from 1955.

The rows showing use within the energy-producing sector can be added for certain items, but not for all. The row showing inputs of the coke and gas industry, for instance, includes the coal originally used, plus coke and gas which are made from this coal and used subsequently. Thus, the row itself cannot be summed. The consolidated tables do, however, provide the data from which an input free of double-counting can be computed if desired.

Comparison of tables 9 to 12 shows changes in the energy pattern. When interpreting these changes, it should be remembered that what is being measured is the B.t.u. consumed, not the B.t.u. effectively applied as energy. Thus, a thousand B.t.u. of electricity fed into an electric motor will produce much more applied energy than a thousand B.t.u. of coal burnt in a boiler to raise steam to drive a steam engine.

Tables 13 to 16 give a percentage breakdown of the more important of those rows of tables 9 to 12,

which can be totalled. The percentage contribution of individual fuels and of electricity to the total is shown.

#### Energy - The Statistical Gap

One advantage of the commodity statements is that they provide a check on the cover of the statistical system, and to some extent on its quality. Given perfection, the supply and distribution sides would balance. Under working conditions, there is a difference between the two sides, usually in the form of a shortfall of measured distribution below the apparent supply. For all the commodities covered. this supply figure can be assumed to be reasonably reliable. Information on the change in inventories is sometimes incomplete, but this item is probably never more than a small part of the total supply. This statistical gap is therefore best measured as the percentage by which the measured portion of consumption falls short of the apparent available supply. The table below shows this statistical gap, ranking the commodities according to the size of the gap (irrespective of sign) in 1939. Data for 1948 and 1952 have been added, to illustrate the improvement in statistical cover which took place during the second world war.

Per Cent by Which the Measured Portion of Distribution of Fuel and Electricity Fell Short of the Apparent Available Supply, Selected Years, 1926 to 1952

	1926	1929	1933	1939	1948	1952
Crude petroleum	- 4.1	0.4	- 3.4	0.8	1.1	0.4
Other petroleum fuels	54. 1	23. 4	5. 6	1.1	3.0	4.7
Gasoline and naphtha	36. 6	2. 1	- 2.3	- 2.7	- 1.3	- 2.2
Electricity	67. 7	86. 1	1. 7	3. 0	3.1	3.0
Natural gas	1	6. 2	14. 1	10.0	0.04	- 0.33
Manufactured gas	1	41. 1	43. 4	11.0	9.2	2.6
Coke (other than petroleum or pitch coke)	2	2	18. 7	32.0	2.8	2,5
Petroleum coke	2	2	62. 9	36.0	7,0	6.6
Coal	33. 6	33. 3	40.2	37. 4	0.7	2.8
Fuelwood and wood waste useable as fuel	90.8	92. 4	93. 1	94. 4	92.6	94.0

<sup>1.</sup> For natural and manufactured gas together, 26.7 per cent in 1926.

Cover on the supply side was high for four groups in 1939, three of which were petroleum or its products. The balance for crude petroleum was good in all four years covered by this study. Production is metered at the wellhead, and returns are made for administrative purposes as well as purely statistical ones. The only domestic consumers are refineries,

which return good detailed statistics. Data for the consumption of other petroleum fuels were good for 1933 and 1939. The balances for gasoline and naphtha were good for 1929, 1933 and 1939. Production is by a fairly small number of refineries, and the total for consumption was obtained from returns made by taxing authorities, on the basis of administrative

<sup>2.</sup> For coke, all types, 44.2 per cent in 1926 and 56.9 per cent in 1929.

statistics. Electricity is a metered product, which is a major reason for the close balances in 1933 and 1939. Natural gas is also metered, and provides a fair balance in 1929, 1933 and 1939.

For the two post-war years, balances were good for all the commodities shown, except fuelwood.

Where the balance is close, the tables presenting data for individual commodities are headed "commodity accounts". Otherwise they are headed "commodity statements".

#### **Production and Available Supply**

The following table gives index numbers for Canadian production of fuels and electricity, and of the supply apparently available within the country. Data for 1948 and 1952 were included to give perspective, and 1948 was taken as the base year to facilitate comparison with material used in Energy Sources in Canada; Commodity Accounts for 1948 and 1952.

Index of the Production and Apparent Available Supply of Fuels and Electricity in Canada, Selected Years, 1926 to 1952

(1948 = 100)

	1926	1929	1933	1939	1948	1952
Production:						
	00.0	04.0	C4 F	0.5.1	100.0	95.3
Coal	89. 3	94.8	64. 5	85. 1	100.0	
Crude petroleum	3. 0	9. 1	9. 3	63. 7	100.0	503.1
Natural gas	20. 7	30.5	24. 9	37. 8	100.0	113. 3
Manufactured gas	38. 8	48. 7	37. 8	57. 3	100.0	113. 8
Coke (excluding petroleum or pitch coke)	51. 4	67. 9	44. 9	61. 1	100.0	102.8
Petroleum coke	58. 9	125. 2	85. 5	75. 9	100.0	232. 6
Gasoline and naphtha	18.0	35. 6	36. 6	60.1	100.0	166. 3
Other petroleum fuels	21.0	36. 5	37.6	47. 2	100.0	168. 2
Electricity	25. 7	41.3	39.6	65, 5	100.0	139.9
Apparent available supply:						
Coal	69. 4	75. 5	49.4	65. 6	100.0	89. 7
Crude petroleum	18.0	34. 4	32. 3	51. 6	100.0	157. 2
Natural gas	21. 4	31. 5	25. 6	38. 7	100.0	110. 2
Manufactured gas	38. 8	48. 7	37. 8	57. 3	100.0	113.8
Coke (excluding petroleum or pitch coke)	04.5	05.0	54.4	66. 3	100.0	99. 1
Petroleum coke	64.5	85.0	29.6	69.9	100.0	138. 3
Gasoline and naphtha	20.3	41. 3	31. 6	52. 6	100.0	155. 2
Other petroleum fuels	23. 3	35. 9	33. 2	41. 5	100.0	180.9
Electricity	23. 3	39.6	41.0	63. 7	100.0	139. 5

Production of all fuels and of electricity increased between 1926 and 1929, the greatest proportional increases being noted in the case of petroleum fuels. Between 1929 and 1933, there was a decrease in all groups shown in the table, except for the liquid petroleum fuels and crude petroleum

Production of all groups shown, except petroleum coke, increased between 1933 and 1939. Fuelwood is excluded from this table because short-period comparisons are not necessarily reliable. For intercensal years, the figures rely heavily on estimates based on population.

The apparent available supply of all groups increased between 1926 and 1929, and decreased for all except electricity between 1929 and 1933. All groups showed increases between 1933 and 1939.

The following table shows the Canadian production of fuel and electricity as a percentage of the supply apparently available. Data for 1948 and 1952 have been added.

Canadian Production of Fuel and Electricity as a Percentage of the Apparent Available Supply in Canada, Selected Years, 1926 to 1952<sup>1</sup>

	1926	1929	1933	1939	1948	1952
Coal	51. 5	50, 2	52, 2	51, 8	40.0	42, 5
Crude petroleum	2. 3	3. 6	4. 0	17.0	13. 7	44. 0
Natural gas	99. 4	99. 5	99.9	100.5	102.8	105.7
Manufactured gas <sup>2</sup>	100.0	100.0	100.0	100.0	100.0	100.0
Coke (excluding petroleum and pitch coke)	69, 1	70, 4	75. 2	83. 9	91.1	94. 5
Petroleum coke	3 69.1	10.4	77.2	29.0	26, 7	45.0
Gasoline and naphtha	73. 9	72. 3	97. 2	95. 6	83. 7	89.8
Other petroleum fuels	74. 1	83. 4	93.0 <sup>3</sup>	93. 3	82. 1	76. 3
Fuelwood and wood waste useable as fuel	100.1	100.3	100.4	100.6	100.3	100. 2
Electricity	114. 1	108.1	100.0	106.6	103. 6	103.9

<sup>1.</sup> From 1926 to 1939, these percentages are taken from the main tables 5 to 8. For 1948 and 1952, they are from tables 3 and 4 of Reference Paper Number 69.

Excludes blast furnace gas.
 Includes some naphtha.

For the six years shown, Canada produced as much electricity, fuelwood, natural gas and manufactured gas as she used. For the four pre-war years which are the subject of this reference paper, just over half the supply of coal came from domestic sources. The available supply of coke in 1926 and 1929 cannot be broken down into its component groups, but between 1933 and 1939 reliance on imports of coke from coal decreased and reliance on imports of petroleum coke increased. Domestic production of the liquid petroleum fuels made up an increasing proportion of consumption during the prewar years covered. Indeed, a higher proportion of the available supply of gasoline and naphtha was provided by domestic production in 1933 and 1939 than in either 1948 or 1952. For the "other petroleum fuels" group, mainly fuel oils, a higher proportion of supply was met from Canadian sources in 1929,

1933 and 1939 than in either of the two post-war years covered. An increasing proportion of the domestic supply of crude petroleum came from Canadian sources during the four pre-war years, and a decrease in 1948 had been heavily counterbalanced by 1952.

#### Use of Fuel and Electricity Within the Energy-Producing Sector

In order to facilitate the elimination of double-counting, when preparing a statement for the net use of fuel and electricity as such, the use of fuel and electricity within the energy-producing sector was broken out separately in the accounts. The table below shows this use as a percentage of the supply apparently available.

Measured Use of Fuel and Electricity Within the Energy-Producing Sector as a Percentage of the Apparent Available Supply in Canada, Selected Years, 1926 to 1952

	1926	1929	1933	1939	1948	1952
		45.5	15.0	4.4.5	45 4	10.0
Coal	14. 1	15, 7	15.8	14. 5	15.4	18. 9
Crude petroleum	104. 1	99.6	103, 4	99. 1	98, 8	99. 3
Natural gas	1 00 0	21.9	11.7	23. 4	12.9	15.8
Manufactured gas <sup>2</sup>	20.6	23. 2	32, 8	47. 7	33. 6	35, 2
Coke (excluding petroleum and pitch coke)	1 50	6, 7	9.4	8. 3	9.6	7. 7
Petroleum coke	5. 6	0. 1	20.7	1.8	2. 5	11.6
Gasoline and naphtha	0.2	3	0.1	0.3	0.1	3
Other petroleum fuels	14. 1	14. 2	12.8	11.0	10.4	7. 6
Fuelwood	3	3	3	3	3	-
Electricity	1.5	1. 2	1. 1	1.0	1.0	1.0

<sup>1.</sup> From 1926 to 1939, these percentages are taken from the main tables 5 to 8. For 1948 and 1952, they are from tables 3 and 4 of Reference Paper Number 69.

Excludes blast furnace gas.
 Less than 0.05 per cent.

There was a wide variation in the percentages over the years covered, and it is difficult to establish definite trends. There has been a steady decrease in the proportion of the supply of fuel oils which has been used by refineries, however. The increase in the proportion of coal going into the energy-producing sector from 1939 on has been due, partly to increased use by coke and gas plants because of expansion of the iron and steel industry, and partly to the increased use of coal by central electric stations as thermal plants are constructed in areas without undeveloped water power.

Electricity used by central electric stations for their own purposes is excluded from this general study, since Canadian data on output exclude power used for the operation of the generating plants. The figures for crude petroleum in 1926 and 1933 indicate the presence of statistical discrepancies, which may have been due to the absence of inventory data.

Tables 9 to 12 cover concepts, for a number of which the data are not additive. Where data are additive, B.t.u. conversions have not been shown in several cases, because cover was not sufficiently complete. The changes in those totals which were computed are considered later in this memorandum.

One of the more important concepts for which data can be estimated by the use of these tables is

the net use of energy as such in Canada. The method is to sum the line for "apparent supply available in Canada" and to deduct from this total the sum of the line "use accounted for in manufacture of fuel or electricity". Neither of the two totals is meaningful in itself, but the deduction takes out the double-counting. The balance can be assumed to be the amount available outside the energy-producing sector.

The question of whether waste should then be deducted depends upon the purpose for which an estimate of the available supply is required. In the following tables, measured waste has been deducted. The data therefore indicate the net consumption of energy sources in Canada.

The following tables show the imputed consumption of individual fuels and of electricity, outside the energy-producing sector, for the years covered by this reference paper, and for 1948 and 1952. The first table is a statement in terms of B.t.u. The second shows the percentage of the total which was provided by each of the commodity groups.

Crude petroleum was included in these tables for completeness, although the negative values obtained in 1926 and 1933 indicate a statistical discrepancy. Unrecorded inventory changes might have been the main cause.

## Imputed Consumption of Individual Fuels, and of Electricity, Outside the Energy-Producing Sector<sup>1</sup>, for Selected Years, 1926 to 1952

(billions of B.t.u.)

, , , , , , , , , , , , , , , , , , , ,									
	1926	1929	1933	1939	1948	1952			
Coal (excluding briquettes)	689,672	740,800	470, 355	645, 984	1,034,503	868, 600			
Coal briquettes	2	2	2	2	17, 426	23, 164			
Crude petroleum	- 3, 962 <sup>3</sup>	682	- 5, 898 <sup>3</sup>	1,763	5, 967	5, 422			
Natural gas	29,631	∫ 22, 265	20, 438	26, 799	44, 465	67, 277			
Manufactured gas	29,031	16, 145	10,972	12,933	28,673	31, 859			
Coke (except petroleum and pitch coke)	70.055	00.004	EE 000	65, 873	97, 878	99,005			
Petroleum coke	70,955	92, 384	55, 660	6,756	9,601	12,031			
Liquefied petroleum gases	2	2	2	2	5, 627	9, 225			
Gasoline and naphtha	45, 348	92,095	70,464	117, 449	223,051	339, 491			
Other petroleum fuels	56, 588	87,088	81,802	104, 460	253, 189	472,029			
Fuelwood and wood waste useable as fuel $\ldots \ldots$	191,888	202,916	179, 564	210, 377	144, 287	121,785			
Electricity	35, 711	60,848	63,081	98, 150	154,070	214,977			
Canada total	1, 115, 831	1, 315, 223	946, 438	1, 290, 544	2, 018, 737	2, 264, 865			

<sup>1.</sup> Apparent available supply minus measured waste

minus measured use in energy-producing sector.

<sup>2.</sup> Not known.

<sup>3.</sup> This negative value is a statistical discrepancy.

#### Percentage Distribution of the Imputed Consumption of Individual Fuels, and of Electricity, Outside the Energy-Producing Sector<sup>1</sup>, for Selected Years, 1926 to 1952

(Per cent of B.t.u. contribution to Canada total)

	1926	1929	1933	1939	1948	1952	
Coal (excluding briquettes)	61.8	50.0	40.5	50.4	54.0		
Coal briquettes	2	56. 3	49.7	50. 1	51. 2	38. 4	
Crude petroleum	-0.43		-0.63	0.1	0.3	0.2	
Natural gas	2.6	1.7	2, 2	2. 1	2. 2	3. 0	
Manufactured gas	2.0		1.2	1. 2	1.0	1. 4	1. 4
Coke (except petroleum and pitch coke)	6, 4	7. 0	5, 9	5. 1	4. 8	4. 4	
Petroleum coke		0	0, 0	0.5	0. 5	0,5	
Liquefied petroleum gases	2	2	2	2	0.3	0.4	
Gasoline and naphtha	4. 1	7. 0	7. 4	9. 1	11. 1	15.0	
Other petroleum fuels	5. 1	6, 6	8. 6	8. 1	12. 5	20.8	
Fuelwood and wood waste useable as fuel	17. 2	15. 5	18.9	16. 3	7. 2	5. 4	
Electricity	3. 2	4. 6	6. 7	7. 6	7. 6	9. 5	
Canada total	100.0	100.0	100.0	100. 0	100.0	100. 0	

1. Apparent available supply minus measured waste minus measured use in energy-producing sector.

Not known.
 This negative value is a statistical discrepancy.

The total B.t.u. input shows the familiar pattern of an increase from 1926 to 1929, and a decline by 1933 followed by a recovery to less than the 1929 level by 1939. The 1948 and 1952 figures indicate a considerable increase. Not all the individual commodities exhibit this behaviour. Coal set the pattern up to 1948 but declined in 1952. The imputed consumption of electricity increased between all the dates shown. The imputed consumption of liquid petroleum fuels decreased less abruptly between 1929 and 1933, was well above 1926 or 1929 by 1939, and showed marked increases both between 1939 and 1948, and between 1948 and 1952. Gas followed the general pattern. The imputed consumption of both natural and manufactured gas increased between 1933 and 1952, approximately trebling in both cases, although the use of natural gas increased more than that of manufactured. Since the data for fuelwood consist in large part of estimates based on population changes between the censal years of 1921, 1931 and 1941, their short-run changes have a limited significance. The possibility that the use of fuelwood might have increased between 1929 and 1933 cannot be completely ruled out.

The percentage distribution reveals considerable changes in the input mix. The declining proportion of coal is marked, although there was a halt in this trend between 1933 and 1948, when the proportion rose slightly. The decline between 1948 and 1952 is all the more striking when viewed in this perspective. The combined proportion for liquid petroleum fuels rose at each year of measurement during the period, from 9.2 per cent in 1926 to 35.8 per cent in 1952. There was a rise from 23.6 per cent in 1948 to 35.8 per cent in 1952. The proportion attributed to electricity increased over the period. The proportion of coke declined from 1929.

The following tables show the imputed consumption outside the energy-producing sector, after deducting measured use as raw materials. This figure is an estimate of the net use as energy sources. The pattern does not differ much from that for the previous tables, except in the case of coke, which was the major fuel used also as a raw material. The proportional decline of coke from 1929 was more pronounced when imputed use as fuel only is considered.

#### Imputed Consumption of Individual Fuels and of Electricity, Outside the Energy-Producing Sector, not as Raw Materials<sup>1</sup>, for Selected Years, 1926 to 1952 (billions of B.t.u.)

	1926	1929	1933	1939	1948	1952
Coal (excluding briquettes)	689, 023	740, 258	469,815	643,931	1, 032, 135	865, 265
Coal briquettes	2	2	2	2	17, 426	23, 164
Crude petroleum	$-3,962^3$	682	-5,898 <sup>3</sup>	1,763	5,967	5, 422
Natural gas	1 00 001	22, 265	20, 438	26,799	44, 465	67, 277
Manufactured gas	29,631	16,145	10,972	12, 933	28,673	31,859
Coke (excluding petroleum and pitch coke)	10.041	60 017	46, 256	<b>42, 103</b>	40, 161	29, 244
Petroleum coke	3,841	63,017	40, 200	3,462	752	1,001
Liquefied petroleum gases	2	2	2	2	5,627	9, 225
Gasoline and naphtha	45, 346	92, 092	70, 463	117, 449	221, 408	337, 680
Other petroleum fuels	56, 565	87,063	81, 786	104,452	252,923	471,685
Fuelwood and wood waste useable as fuel	191,818	202, 897	179, 561	210, 336	140,922	114, 496
Electricity	35, 711	60,848	63,081	98, 150	154, 070	214, 977
Canada total	1, 087, 973	1, 285, 267	936, 474	1, 261, 378	1, 944, 529	2, 171, 295

1. Apparent available supply minus measured waste minus measured use in energy-producing sector minus measured use as raw material.

Not known.
 This negative value is a statistical discrepancy.

## Percentage Distribution of the Imputed Consumption of Individual Fuels and of Electricity, Outside the Energy-Producing Sector, not as Raw Materials<sup>1</sup>, for Selected Years, 1926 to 1952

(Per cent of B.t.u. contribution to Canada total)

	1926	1929	1933	1939	1948	1952
Coal (excluding briquettes)	63.4	57.6	50.2	51.1	53.1	39.8
Coal briquettes	2	2	2	2	0.9	1.1
Crude petroleum	- 0. 4 <sup>3</sup>	0.1	-0.6 <sup>3</sup>	0.1	0.3	0.2
Natural gas	} 2.7	1.7	2.2	2.1	2.3	3.1
Manufactured gas	3 4.1	1.3	1.2	1.0	1.5	1.5
Coke (except petroleum and pitch coke)	} 4.0	4.9	4.9	3.3	2.1	1.4
Petroleum coke	3.0	4. 3	7. 3	0.3	4	0.1
Liquefied petroleum gases	2	2	2	2	0.3	0.4
Gasoline and naphtha	4.2	7.1	7.5	9.3	11.4	15.5
Other petroleum fuels	5.2	6.8	8.7	8.3	13.0	21.7
Fuelwood and wood waste useable as fuel	17.6	15.8	19.2	16.7	7. 2	5. 3
Electricity	3.3	4.7	6.7	7.8	7.9	9.9
Canada total	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0

1. Apparent available supply minus measured waste minus measured use in energy-producing sector minus measured use as raw material.

2 Not known.

3. This negative value is a statistical discrepancy.4. Less than 0.05 per cent.

#### Imputed Use of Energy per Head

The following table relates the imputed input of energy sources to the population. Whether or not measured use as a raw material is included, use per head outside the energy-producing sector shows an increase between 1926 and 1929, and a pronounced decrease between 1929 and 1933. By 1939, imputed consumption per head had increased but was not yet back to the 1926 level. By 1948, it was considerably

above the pre-war level, but the 1952 level was approximately the same. The significance of B.t.u. of input per head, in terms of energy effectively applied, varies with the input mix. Between 1948 and 1952, for instance, there was a pronounced change in this mix<sup>1</sup>, from coal to petroleum products.

Use of Fuels and of Electricity Per Head of Population, Selected Years, 1926 to 1952

	Population at 1 June				f energy outside ducing sector, s raw material <sup>2</sup>
	Thousands	Total	Per head	Total	Per head
	of persons	Billions of B.t.u.	Millions of B.t.u.	Billions of B.t.u.	Millions of B.t.u.
19 26	9,451	1, 115, 831	118. 1	1,087,973	115.1
1929	10,029	1, 315, 223	131. 1	1, 285, 267	128. 2
1933	10, 633	946, 438	89.0	936, 474	88.1
1939	11, 267	1, 290, 544	114.5	1, 261, 378	112.0
1948	12,823	2,018,737	157.4	1,944,529	151.6
1952	14, 430	2, 264, 865	157.0	2, 171, 295	150.5

Apparent available supply minus measured use in energy-producing sector minus measured waste.

#### Apparent available supply minus measured use in energy-producing sector minus measured waste minus measured use as raw material.

#### Changes in Measured Additive Concepts

The following table shows the changes in total for certain additive concepts, together with imputed totals for consumption. Data for 1948 and 1952 have been added to give perspective.

The B.t.u. content of net imports increased between 1926 and 1929, but dropped considerably by 1933. It doubled between 1939 and 1948, with a small decline by 1952. Imputed consumption, both with and without measured use as raw material, followed the pattern of a rise between 1926 and 1929, a decline by 1933, and increases thereafter. Use as a raw material followed the same pattern, but the changes from 1929 on were more pronounced, largely because of

the dominating effect of coke used in iron manufacture. Measured use by manufacturers and mines showed a steady increase from 1933 on. Transportation showed a decrease in 1933, followed by a rise.

The change in the B.t.u. measurement of a concept does not, of course, show the full significance of the change for the effective application of energy. Net imports, for instance, contained a decreasing proportion of coal over the period as a whole, and an increasing proportion of crude petroleum up to 1939. Liquid petroleum fuels made up a larger proportion of net imports in 1948 and 1952 than in any of the pre-war years covered. The changes in the energy mix for imputed consumption have already been reviewed.

Change in Total Measured Energy For Selected Economic Concepts, Selected Years, 1926 to 1952

	(pillion)	S OI D.L.U.)				
	1926	1929	1933	1939	1948	1952
Net imports	595, 456	718, 888	491,874	615, 228	1, 389, 649	1, 310, 097
Imputed consumption outside the energy-producing sector I	1, 115, 831 27, 858	1, 315, 223 29, 956	946, 438 9, 964	1, 290, 544 29, 166	2, 018, 737 74, 208	2, 264, 865 93, 570
Imputed consumption outside the energy-producing sector, not as raw materials 2	1, 087, 973	1, 285, 267	936, 474	1, 261, 378	1,944,529	2, 171, 295
Measured portion of use outside the energy- producing sector: Manufacturing Mining Transportation	3 10, 299 3	3 11,876 384,776	179, 052 6, 958 268, 756	270, 769 17, 455 378, 960	} 530, 143 637, 713	} 575,398 765,982

Apparent available supply minus measured use in energy-producing sector minus measured waste.

<sup>1.</sup> See previous tables, also Energy Sources in Canada; Commodity Accounts for 1948 and 1952, tables 7, and 8.

<sup>3.</sup> B.t.u. conversion not computed.

Apparent available supply minus measured use in energy-producing sector

minus measured waste minus measured use as raw material.

#### Crude Mineral Fuels

When crude mineral fuels alone are considered, production and apparent available supply can be

added up without double-counting. A presentation of the data for mineral fuels is given below. Data for 1948 and 1952 have been added to improve the historical perspective.

## Production, Net Imports, Net Decrease in Stocks and Apparent Available Supply of Crude Mineral Fuels in Canada, Selected Years, 1926 to 1952

(billions of B.t.u.)

	Production	Net imports	Net decrease in measured stocks	Apparent available supply of crude mineral fuels
1926				
Coal	401, 443 2, 169 19, 208	455, 184 <sup>1</sup> 93, 398 119	-39,814	816, 813 95, 567 19, 327
Total crude mineral fuels	422, 820	548, 701	-39, 814	931, 707
1929				
Coal	423, 408 6, 648 28, 378	476, 140 <sup>1</sup> 176, 414 133	-11, 209 	888, 339 183, 062 28, 511
Total crude mineral fuels	458, 434	652, 687	-11, 209	1,099,912
1933				
Coal	279,888 6,815 23,138	298, 435 <sup>1</sup> 164, 803 26	- 7,052 - -	571, 271 171, 618 23, 164
Total crude mineral fuels	309, 841	463, 264	- 7,052	766, 053
1939				
Coal	382,082 46,567 35,185	359, 874 <sup>1</sup> 227, 335 - 19	29, 763 825 - 165	771,719 274,727 35,001
Total crude mineral fuels	463, 834	587, 190	30, 423	1, 081, 447
1948				
Coal (excluding briquettes) Crude petroleum Natural gas	480, 661 73, 106 92, 960	794, 407 470, 912 404	-51, 605 -11, 188 - 2, 955	1, 223, 463 531, 930 90, 409
Total crude mineral fuels	646, 727	1, 264, 823	-65, 748	1, 845, 802
1952				
Coal (excluding briquettes) Crude petroleum Natural gas	451,715 367,812 105,364	645, 505 487, 889 -2, 164	- 5, 988 - 19, 495 - 3, 536	1, 091, 232 836, 206 99, 664
Total crude mineral fuels	924, 891	1, 131, 230	-29,019	2, 027, 102

1. Includes briquettes.

The B.t.u. equivalent of the apparent available supply increased between 1926 and 1929, dropped during the depression, and had risen by 1939 almost to its 1929 value. By 1948, it had increased by over three-quarters of its 1939 value, and by 1952, was nearly double the 1939 amount.

The production of crude mineral fuels, in terms of B.t.u. equivalents, showed the same general trend

as the available supply. By 1939, it was back again to slightly over the 1929 level, and by 1952, the 1939 level had been doubled.

Imports followed the same general trend. The variations in the contribution to supply of domestic and foreign sources is shown by the table below, in which production, imports and decreases in stocks are shown as percentages of the apparent available supply.

Production, Net Imports, and Net Decrease in Measured Stocks of Crude Mineral Fuels in Canada as a Percentage of the Apparent Available Supply, Selected Years, 1926 to 1952

Year	Production	Net imports	Net decrease in measured stocks	Apparent available supply
1926	45. 4	58· 9	- 4. 3	100.0
	41. 7	59· 3	- 1. 0	100.0
	40. 4	60· 5	- 0. 9	100.0
	42. 9	54· 3	2. 8	100.0
	35. 0	68· 5	- 3. 5	100.0
	45. 6	55· 8	- 1. 4	100.0

The proportion of the available supply of crude mineral fuels which come from Canadian sources decreased between 1926 and 1933. An increase by 1939 was more than counterbalanced during the war years, with the result that the percentage contribution in 1948 was lower than for the four years recorded previously. By 1952, however, the Canadian proportion was back again to its 1926 level.

The part played in this change of pattern by changes in the use of fuels from coal to petroleum and natural gas is shown in the table below, in which the individual fuels are expressed as percentages of total crude mineral fuels, for specified concepts,

Production, Net Imports, and Apparent Available Supply of Crude Mineral Fuels in Canada, as a Per Cent of Total Crude Mineral Fuels, Selected Years, 1926 to 1952

(per cent of total mineral fuels)

	Production	Net imports	Apparent available supply of crude mineral fuels
1926			
Coal	95·0 0·5 4·5	83· 0 <sup>1</sup> 17· 0	87. 7 10. 2 2. 1
Total crude mineral fuels	100.0	100.0	100.0
1929		. 1	
Coal	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	73· 0 <sup>1</sup> 27· 0	80· 8 16· 6 2· 6
Total crude mineral fuels	100.0	100.0	100.0
1933			
Coal	90·3 2·2 7·5	64· 4 <sup>1</sup> 35· 6	74. 6 22. 4 3. 0
Total crude mineral fuels	100.0	100.0	100.0
1939			
Coal	82· 4 10· 0 7· 6	61· 3 <sup>1</sup> 38· 7	71. 4 25. 4 3. 2
Total crude mineral fuels	100.0	100.0	100. 0
1948			
Coal (excluding briquettes)	74. 3 11. 3 14. 4	62· 8 37· 2	66. 3 28. 8 4. 9
Total crude mineral fuels	100.0	100. 0	100.0
1952			
Coal (excluding briquettes)	48. 8 39. 8 11. 4	57· 1 43· 1 - 0· 2	53. 8 41. 3 4. 9
Total crude mineral fuels	100. 0	100. 0	100. 0

<sup>1.</sup> Includes briquettes.

<sup>2.</sup> Less than .05 per cent.

In the total supply picture for crude mineral fuels, coal has played a decreasing part. The portion supplied by crude petroleum increased over the period. The proportion supplied by natural gas increased to 1948, and was the same in 1952.

Coal made up a decreasing proportion of the total production of crude mineral fuels over the period, with a sharp drop between 1948 and 1952. The proportion of imports which it formed decreased during the pre-war years, was higher in 1948 than in 1939, and decreased again by 1952.

Crude petroleum made up an increasing proportion of production over the period. This proportion more than trebled between 1948 and 1952. Crude petroleum also made up an increasing proportion of imports during the period. Natural gas made up an increasing part of the production during the earlier years, but the proportion steadied between 1948 and 1952.

#### The Percentage Contribution of Individual Commodity Groups to Selected Totals

Tables 13 to 16 show the percentage contribution of the individual commodities or commodity groups to the Canada totals for certain series. The general

pattern indicates the increasing importance of petroleum fuels and electricity, and decreasing importance of coal and wood.

The table below shows the different commodities which made up the net imports of energy sources. Data for 1948 and 1952 are included. This does not, of course, give the complete trade picture, since the net figure was arrived at after deducting exports from imports. A figure for net imports could be misleading where there were heavy imports of a commodity into one part of the country, and heavy exports from another. A review of the tables for the individual commodities, where both imports and exports are shown, does however show that exports of fuels were of relatively small importance during the years shown in the table.

Natural gas, fuelwood and electricity were not important in the international trade field during the years in question. For the other items, there was a decline in the proportion of coal from over three-quarters of total net imports in 1926 to about half in 1952. The proportion made up of crude petroleum more than doubled between 1926 and 1933, and remained at about the same proportion for the succeeding years covered. The share of petroleum products fluctuated during the pre-war years, but showed a marked increase between 1948 and 1952.

#### The Main Energy Commodities as a Percentage of Net Imports of Fuel and Electricity, Selected Years, 1926 to 1952

(Per cent of B.t.u. contribution to Canada total)

	Coal	Coal products	Crude petroleum	Petroleum products	Natural gas	Fuelwood	Electricity	Canada total
1926	76. 4	3. 9 <sup>2</sup>	15. 7	4.9 <sup>3</sup>	1	1	-0.9	100-0
1929	66. 2	4· 1 <sup>2</sup>	24. 6	5. 9 <sup>3</sup>	1	- 0. 1	- 0. 7	100.0
1933	60. 7	3. 0	33. 5	2. 9	1	- 0. 1	1	100-0
1939	58. 5	1. 9	37. 0	3. 9	1	- 0. 2	- 1. 1	100-0
1948	57- 7	0.7	33. 8	8. 2	1	1	-0.4	100 · 0
1952	49. 6	0.5	37. 2	13. 5	-0.2	1	- 0. 6	100.0

<sup>1.</sup> Less than .05 per cent.

<sup>2.</sup> Includes petroleum coke.

<sup>3.</sup> Excludes petroleum coke.

The table below shows the main group of energy commodities as percentages of the measured use of fuel and electricity by selected sectors of the economy, for selected years 1926 to 1952. When interpreting these figures, it should be remembered that there is some double-counting, because some of the fuel consumed by manufacturers and mines was used for generating electricity. In the fields of manufacturing and mining, coal has not shown the marked long-run decline in relative importance observed in the economy as a whole. There was, however, a substantial

drop in the proportion between 1948 and 1952. The proportion of B.t.u. input supplied by petroleum fuels and by natural gas has been increasing, while that supplied by fuelwood has been decreasing.

In transportation, coal and its products supplied a decreasing proportion of the energy input since 1929, while the proportion supplied by petroleum products rose steadily. By 1952, petroleum products were of greater importance than coal in this sector of the economy.

#### The Main Group of Energy Commodities as a Percentage of Measured Use of Fuel and Electricity by Selected Sectors of the Economy, for Selected Years, 1926 to 1952

(Per cent of B.t.u. contribution to Canada total)

	Coal and its products	Petroleum products	Natural gas	Fuelwood	Electricity	Canada total
Mines (non-fuel producing):						
1926	57. 1 <sup>2</sup>	5.0	1	23.9	14.0	100.0
1929	62.7	6.8	1	12.3	18. 2	100.0
1933	39.2	12.4	0.2	18.5	29.7	100.0
1939	45.1	12.6	0.2	11.2	30.9	100.0
Manufacturers (non-fuel producing):						
1933	60.5	11. 1	1.4	6.1	20.9	100.0
1939	61.9	8.7	1.6	3.5	24.3	100.0
Mines and manufacturers (non-fuel producing):						
1933	59.8	11.1	1.3	6.6	21. 2	100.0
1939	60.9	8.9	1.5	4.0	24.7	100.0
1948	62.6	13.5	2.44	1.4	20.1	100.0
1952	53.3	18.4	3.94	epindo.	24.4	100.0
Transportation:						
1929	70.2	28. 8	0.3	0.2	0.53	100.0
1933	57.8	36.8	0.2	0.1	5.13	100.0
1939	56.9	39.9	0.2	1	3. 0	100.0
1948	58. 8	38.4	0.1	1	2.7	100.0
1952	38.7	58. 25	0.2	1	2. 9	100.0

<sup>1.</sup> Less than .05 per cent.

Includes petroleum coke, if any.
 Includes line losses.

<sup>4.</sup> Includes use as raw material.

<sup>5.</sup> Includes crude petroleum, 0.2 per cent of Canada total.

TABLE 1. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

		Coal	Crude petroleum	Natural and manufactured gas <sup>1</sup>
NIO		Tons	Thousands of imperial gallons	Thousands of cubic feet
No.				
1 Pr	roduction in Canada	16, 478, 131	12, 756	52, 699, 461
2 N	et imports	17, 014, 046	549, 401	119, 310
	et decrease in measured stocks	-1,476,691	-	_
4 A1	pparent supply available in Canada	32, 015, 486	562, 157	52, 818, 771
5 Us	se unaccounted for	10, 758, 745	- 23, 309	14,096,214
6 U:	se accounted for in Canada, including waste	21, 256, 561	585, 466	38,722,557
7 W	aste accounted for	267, 620	-	-
8 U	se accounted for in Canada, net of waste	20, 988, 941	585, 466	38, 722, 55'
9 U	sed for manufacture of fuel or electricity	4, 524, 343	585, 466	10, 359, 85
10	(1) Coal mines	947, 668	-	-
11	(2) Coal briquette plants at mines	10, 343	-	~
12	(3) Natural gas industry	2, 508	-	101, 02
13	(4) Oil wells	3, 289	-	956, 00
14	(5) Coke and gas plants	2, 940, 218	-	6, 494, 77
15	(6) Petroleum products industry	163, 991	585, 466	2, 482, 19
16	(7) Central electric stations	456, 326	_	825, 85'
17 M	easured portion of use outside the energy producing sector	16, 464, 598	-	27, 862, 703
18 U	se accounted for as raw materials	24, 502	-	
19 M	easured portion of use as fuel or electricity outside the energy-producing sector	16, 440, 096	-	27, 862, 70
20	(1) Households	189, 934	_	11 000 01
21	(2) Commercial		_	11, 853, 61
22	(3) Manufacturers	6, 000, 046		14, 846, 67
23	(4) Mines	214, 749	-	5, 08
24	(5) Transportation	10, 035, 367	-	1, 100, 70
25	(6) Non-assignable	_	_	56, 62

Excludes blast furnace gas.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Accounted for but not sold.

TABLE 1. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

Coke (except pitch coke)	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	
Tons	Thousands of imperial gallons	Thousands of imperial gallons	Cords	Thousands of kilowatt hours	N
2, 078, 603	223, 789	286, 976	9, 606, 173	12, 127, 241	
927, 463	78, 972	100, 441	- 11, 686	- 1, 500, 648	
-	_	_	_	_	
3, 006, 066	302, 770	387, 417	9, 594, 487	10, 626, 593	
1, 329, 057	110, 905	209, 544	8, 707, 153	7, 191, 172	
1, 677, 009	191, 865	177, 873	887, 334	3, 435, 421	
_	_	etion	_	_	
1, 677, 009	191, 865	177, 873	887, 334	3, 435, 421	
167, 867	456	54, 550	73	160, 254	
_	_	-	-	114, 543	1
_	-	_	-	-	1
-	_	85	-	77	1
-	5	180	70	1, 900	1
153, 144	76	12, 156	-	26, 037	1
14, 722	32	40, 848	3	17, 697	1
1	343	1, 281	-	-	1
1, 509, 142	191, 409	123, 323	887, 261	3, 275, 167	1
1, 084, 580	15	133	3, 518	-	1
424, 562	191, 394 <sup>5</sup>	123, 190	883, 743	3, 275, 167	1
_	-	-	-	-	2
_	-	-	-	-	2
420, 288	2, 385 <sup>5</sup>	69, 531	722, 095	2, 460, 324 <sup>6</sup>	
4, 274	4475	2, 597	122, 957	422, 913	2
-	188, 562 <sup>5</sup>	51, 062	38, 691	391, 930 <sup>7</sup>	
_	_	-	-	-	2

<sup>5.</sup> There may be some double-counting between transportation and either manufacturers or mines, or both.
6. Use by those manufacturing industries for which information is available. Not comparable with later series.
7. Includes line loss on exports.

TABLE 2. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

	,	Coal	Crude petroleum	Natural gas
No.		Tons	Thousands of imperial gallons	Thousands of cubic feet
1	Production in Canada	17, 496, 557	39, 108	28, 378, 462
2	Net imports	17, 776, 328	1,037,732	132,942
3	Net decrease in measured stocks	- 415, 137		_
4	Apparent supply available in Canada	34, 857, 748	1,076,840	28, 511, 404
5	Use unaccounted for	11, 597, 276	4,012	1,755,869
6	Use accounted for in Canada, including waste	23, 260, 472	1,072,828	26, 755, 535
7	Waste accounted for	235, 284	-	1,552
8	Use accounted for in Canada, net of waste	25, 025, 188	1,072,828	26,753,983
9	Used for manufacture on fuel or electricity	5, 472, 769	1,072,828	6, 244, 790
10	(1) Coal mines	980,600	_	_
11	(2) Coal briquette plants at mines	105, 635	_	_
12	(3) Natural gas industry	1,783	-	83,002
13	(4) Oil wells	7,920	_	5, 489, 032
14	(5) Coke and gas plants	3,756,781	-	_
15	(6) Petroleum products industry	83, 872	1,072,828	_
16	(7) Central electric stations	536, 178	-	672,756
17	Measured portion of use outside the energy-producing sector	17, 552, 419	_	20, 509, 193
18	Use accounted for as raw materials	20, 115	_	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	17, 532, 304	_	20, 509, 193
20	(1) Households	204, 581	-	1
21	(2) Commercial	_		} 14,981,832 <sup>4</sup>
22	(3) Manufacturers	7,051,005	_	4,558,391
23	(4) Mines	271, 176	_	3, 335
24	(5) Transportation	10, 005, 542	_	965, 635
25	(6) Non-assignable	_	_	_

Excludes blast furnace gas.
 Electricity generated for own use only. Excludes purchased electricity.

TABLE 2. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

	Electricity	Fuelwood and wood waste useable as fuel	Other petroleum fuels	Gasoline and naphtha	Manufactured gas 1	Coke (except pitch coke)
No	Thousands of kilowatt hours	Cords	Thousands of imperial gallons	Thousands of imperial gallons	Thousands of cubic feet	Tons
1	19,511,615	10, 174, 978	498,062	443,890	42,065,273	2,787,097
2	-1,458,589	- 26, 491	98,878	170, 314	_	1,174,095
3	_	-	-	-	_	-
4	18,053,026	10, 148, 487	596, 940	614, 204	42,065,273	3,961,192
5	15, 542, 601	9,380,103	139, 535	12,979	17, 263, 078	2, 254, 725
6	2, 510, 425	768, 384	457,405	601, 225	24, 802, 195	1,706,467
1	_		_	_		_
8	2, 510, 425	768, 384	457,405	601, 225	24, 802, 195	1,706,467
9	219, 387	2,661	84,661	241	9, 775, 608	265, 813
1	149,276	2,008	1	-10	_	-
1	_	_	_	_	_	
1	3	18	_			2
1	2, 207	624	343	45	_	_
1	40,191	_	9,365	3	6,635,272	241,742
1	27,710	11	62, 197	74	3, 140, 336	24,069
1	-	-	12,755	109	_	-
1'	2, 291, 038	765, 723	372,744	600,984	15,026,587	1,440,654
1		958	145	20	-	1,174,686
1	2, 291, 038	764,765	372, 599	600, 964	15, 026, 587	265, 968
2	_	_	52,080	_	_	_
2	-	-	-	_		_
2	1,083,0732	655, 965	89, 382	1,715	14,721,324	262, 427
2	634, 173	73, 117	4,122	724	127, 171	3, 541
2	573,792 <sup>3</sup>	35, 683	227,015	482,715	_	_
2	-	-	_	115, 810	178,092	

Includes line loss on exports.
 Includes use by private well owners in Ontario.

TABLE 3. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1933

		Coal	Crude petroleum	Natural gas
No.		Tons	Thousands of imperial gallons	Thousands of cubic feet
1	Production in Canada	11, 903, 344	40, 087	23, 138, 103
2	Net imports	11, 161, 892	969, 431	25,819
3	Net decrease in measured stocks	- 261, 939	-	g/maps
4	Apparent supply available in Canada	22, 803, 297	1,009,518	23, 163, 922
5	Use unaccounted for	9, 155, 812	-34,693	3, 253, 128
6	Use accounted for in Canada, including waste	13,647,485	1,044,211	19,910,794
7	Waste accounted for	219, 632	_	
8	Use accounted for in Canada, net of waste	13, 427, 853	1,044,211	19,910,794
9	Used for manufacture of fuel or electricity	3, 616, 363	1, 044, 211	2,726,715
10	(1) Coal mines	689,993	_	_
11	(2) Coal briquette plants at mines	15,886		_
12	(3) Natural gas industry	2,867	-	79,332
13	(4) Oil wells	107	_	1, 645, 033
14	(5) Coke and gas plants	2, 493, 918	_	_
15	(6) Petroleum refineries	24,406	1,044,211	689, 885
16	(7) Central electric stations	389, 186		312,465
17	Measured portion of use outside the energy-producing sector	9,811,490	_	17, 184, 079
18	Use accounted for as raw materials	20,078	_	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	9, 791, 412	_	17, 184, 079
20	(1) Households	152,724	_	)
21	(2) Commercial	_	arrea	14, 231, 4656
22	(3) Manufacturers	3,776,889	_	2, 428, 517
23	(4) Mines	105, 235	_	10,861
24	(5) Transportation	5, 756, 564	_	513, 236
25	(6) Other	_	-	_
26	(7) Non-assignable			

Excludes blast furnace gas.
 Includes some naphtha.
 Includes line losses.
 Street lighting.

TABLE 3. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1933

0 0 0	Jan Canada, 1		radionol F del				
	Electricity	Fuelwood and wood waste useable as fuel	Other petroleum fuels	Gasoline and naphtha	Manufactured gas <sup>1</sup>	Petroleum coke	Coke (except petrole um coke and pitch coke)
No.	Thousands of kilowatt hours	Cords	Thousands of imperial gallons	Thousands of imperial gallons	Thousands of cubic feet	Tons	Tons
1	18, 696, 264	9,012,420	513,3622	456, 956	32, 630, 700	74, 725	1, 772, 164
2	2, 264	- 34, 106	70, 905	13,079	et en	22, 091	583, 944
3		_	- 32, 322	-	_	_	_
4	18, 698, 528	8,978,314	551, 945	470,035	32, 630, 700	96, 816	2, 356, 108
5	303, 987	8, 353, 761	31,045	-10,889	14, 168, 185	60, 940	438, 957
	10 004 544	604 550	500 000	400 004	10 460 515	25 974	1 017 151
6	18, 394, 541	624, 553	520,900	480,924	18, 462, 515	35, 874	1,917,151
7	-	-		400 004	- 10 400 515	25 074	1 015 151
8	18, 394, 541	624, 553	520,900	480, 924	18, 462, 515	35, 874	1,917,151
9	211, 885	110	70,761	279	10,687,171	20,079	222, 149
10	134, 301	-	10	45	_	_	-
11	_		dinor	-	-	_	_
12	11	-	4	22	-	_	-
13	3,308	82	36	3	_		
14	23, 046	-	10,582	6	7, 175, 766	_	222, 149
15	51, 219	28	57, 382	155	3, 511, 405	20,079	-
16	-		2,747	48	_	_	-
17	18, 182, 656	624, 443	450, 139	480, 645	7, 775, 344	15,795	1,695,002
18	_	125	95	4	_	15, 795	357, 104
19	18, 182, 656	624, 318	450,044	480,641	7,775,344	_	1, 337, 898
20	1,650,395	_	122, 688	-	_	_	1,157,376
21	746, 555	-	-	-	_	_	_
22	10,938,650	549, 684	116,055	1, 074	7,641,652	_ 7	179,930
23	605, 511	64, 191	4, 549	620	363	_ 7	592
24	4, 040, 130 <sup>3</sup>	10, 443	206, 752	424, 510	_	_	_
25	184, 765 <sup>4</sup>	derm	-		s meth	-	_
26	16, 650 <sup>5</sup>	-	_	54, 437	133, 329	_	_

<sup>5.</sup> Free service (other than street lighting).6. Includes use by private well owners in Ontario.7. Some use by manufacturers or mines may have been included with other coke.

TABLE 4. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

		Coal	Crude petroleum	Natural gas
			Thousands	Thousands
		m	Thousands of	of
		Tons	imperial gallons	cubic feet
No.			ganons	
		15 600 600	273, 921	25 105 146
1	Production In Canada	15, 692, 698	1, 337, 266	35, 185, 146
2	Net imports	13, 474, 137	1	- 19, 127 - 164, 629
3	Net decrease in measured stocks	1, 113, 829	4,852	
4	Apparent supply available in Canada	30, 280, 664	1,616,039	35, 001, 390
5	Use unaccounted for	11, 320, 722	10, 367	3, 513, 927
6	Use accounted for in Canada, including waste	18, 960, 058	1,605,672	31, 487, 463
7	Waste accounted for	351,670	1,5381	_
8	Use accounted for in Canada, net of waste	18,608,388	1,604,134	31, 487, 463
9	Used for manufacture of fuel or electricity	4,410,079	1,604,134	8, 201, 610
10	(1) Coal mines	606, 024	1,001,101	0, 201, 010
11	(2) Coal briquette plants at mines	43, 875	_	_
12	(3) Natural gas industry	224		155, 500
13	(4) Oil wells	2,797	_	6, 159, 274
14	(5) Coke and gas plants	3, 296, 296	_	-
15	(6) Petroleum refineries	11,650	1,604,134	1,559,740
16	(7) Central electric stations	449, 213		327,096
17	(8) Other	-	_	-
18	Measured portion of use outside the energy-producing sector	14, 198, 309		23, 285, 853
	Sector	14, 190, 309		23, 203, 033
19	Use accounted for as raw materials	97,110	_	-
20	Measured portion of use as fuel or electricity outside the			
	energy-producing sector	14, 101, 199	-	23, 285, 853
21	(1) Households	185, 554	-	} 18,407,690 <sup>2</sup>
22	(2) Commercial	1000	-	J
23	(3) Manufacturers	5, 528, 416	_	4, 226, 075
24	(4) Mines	326, 152	_	40,810
25	(5) Transportation	8,061,077		611, 278 <sup>3</sup>
26	(6) Other			-
27	(7) Non-assignable	-	-	_

Excluding Ontario.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Excludes blast furnace gas.
 Accounted for but not sold.
 There may be some double-counting between transportation and either manufacturers or mines, or both.

TABLE 4. Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

	Electricity	Fuelwood and wood waste useable as fuel	Other - petroleum fuels	Gasoline and naphtha	Manufactured gas 4	Petroleum coke	Coke (except petroleum coke and pitch coke)
1	Thousands		Thousands	Thousan ds	Thousands		
No.	of kilowatt hours	Cords	of imperial gallons	of imperial gallons	of cubic feet	Tons	Tons
1	30, 966, 960	10, 585, 951	643, 542	748, 781	49,474,909	66,332	2,410,095
2	-1,914,394	- 65, 599	64, 285	66, 626	quality.	112,086	463, 374
3	_	-	-17,904	- 31, 953	40 474 000	50, 144	0.070.460
4	29, 052, 566	10, 520, 352	689, 923	783,454	49,474,909	228, 562	2, 873, 469
5	878,032	9, 935, 579	7,728	- 20, 764	5, 446, 498	82,237	919, 247
6	28, 174, 534	584,773	682,195	804,218	44, 028, 411	146, 325	1,954,222
7	20,171,001	-	-	-		_	-
8	28, 174, 534	584,773	682,195	804, 218	44,028,411	146, 325	1,954,222
9	286, 284	1,515	75,455	459	23, 608, 134	4,238	238, 518
10	180,875	_	47	116	_	_	_
11	_	_	_	_			_
12	17	12	5	31	_	-	_
13	1,980	1,340	623	76		*****	-
14	41,351	3	4,324	17	15,810,014	_	238, 518
15	62,061	160	61,741	193	7,798,120	4,238	-
16	_	_	8,107	26	-	_	_
17	****	_	608	desirina	_	_	-
18	27,888,250	583, 258	606,740	803,759	20, 420, 277	142,087	1,715,704
19	-	2,072	48	3	_	109,377	950, 795
20	27, 888, 250	581, 186	606,692	803,756 <sup>6</sup>	20, 420, 277	32,710	764,909
21	2,310,891	-	161,705			32,710	313, 237
22	1,109,008	-	_	_	_	_	_
23	19, 327, 021	475, 157		5, 2726	19,993,891	11	443,851
	1,578,468	97,984		1,9086	155, 402	11	7,821
	3,341,638	8,045	300,065	668,124 <sup>6</sup>	39, 470	_	_
	204, 088 <sup>1</sup> 17, 136 <sup>9</sup>	_	_		-	_	_
41	17,136	_	_	128, 452 <sup>7</sup>	231, 514 <sup>5</sup>	_	_

Gasoline untaxed but accounted for.
 Includes line losses.
 Free service.
 Street lighting.
 Some use by manufacturers or mines may have been included with other coke.

TABLE 5. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1926 (per cent of supply available in Canada)

No.		Coal	Crude petroleum	Natural and manufactured gas 1
1	Production in Canada	51. 5	2, 3	99, 8
2	Net imports	53, 1	97. 7	0. 2
3	Net decrease in measured stocks	- 4. 6	_	_
4	Apparent supply available in Canada	100.0	100. 0	100.0
5	Use unaccounted for	33. 6	-4.1	26. 7
6	Use accounted for in Canada, including waste	66. 4	104. 1	73, 3
7	Waste accounted for	0, 8	-	_
8	Use accounted for in Canada, net of waste	65. 6	104. 1	73. 3
9	Used for manufacture or fuel or electricity	14. 1	104. 1	20, 6
10	(1) Coal mines	3, 0	_	nation
11	(2) Coal briquette plants at mines	7	_	-
12	(3) Natural gas industry	7	_	0. 2
13	(4) Oil wells	7	_	1. 8
14	(5) Coke and gas plants	9. 2	_	12. 3
15	(6) Petroleum products industry	0, 5	104. 1	4. 7
16	(7) Central electric stations	1.4	_	1. 6
17	Measured portion of use outside the energy - producing sector	8	-	8
18	Use accounted for as raw materials	0. 1	-	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	8	_	8
20	(1) Households	8	_	2,8
21	(2) Commercial	. 8	-	2,8
22	(3) Manufacturers	18. 7		28. 1
23	(4) Mines	0.7	_	7
24	(5) Transportation	31. 3	_	2. 1 <sup>3</sup>
25	(6) Non-assignable	_	_	0. 14

Excludes blast furnace gas.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Accounted for, but not sold.

TABLE 5. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1926

Coke (except pitch coke)	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	No.
69. 1	73. 9	74. 1	100. 1	114. 1	1
30. 9	26. 1	25. 9	- 0. 1	- 14. 1	
-	_	_	_		3
100. 0	100. 0	100.0	100. 0	100. 0	4
44. 2	36. 6	54. 1	90. 8	67. 7	5
55. 8	63. 4	45. 9	9. 2	32. 3	6
-	-		****	-	7
55. 8	63. 4	45. 9	9. 2	32. 3	8
5. 6	0. 2	14. 1	7	1. 5	9
-	-	_		1. 1	10
_	_	non.	_		11
-	-	7	-	7	12
~	7	0.1	7	7	13
5. 1	7	3. 1			2 14
0, 5	7	10. 6		-	
7	0. 1	0.3			
8	8	8	8	8	17
36. 1	7	7	7	_	18
e	8	8	8	8	19
8	8	8	8	8	20
8	8	8	8	8	21
14. 0	0.85		7. 5		22
0. 1	0. 15	0.7			23
_	8	8	0.4		24
_	_	_			25

There may be double-counting between transportation and either manufacturers or mines, or both.
 Includes line loss on exports only.
 Less than 0.05 per cent.
 Cover not sufficiently complete to justify publication of a percentage.

TABLE 6. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1929

No.		Coal	Crude petroleum	Natural gas
1	Production in Canada	50.2	3.6	99. 5
2	Net imports	51.0	96. 4	0.5
3	Net decrease in measured stocks	-1.2	_	_
4	Apparent supply available in Canada	100.0	100.0	100.0
5	Use unaccounted for	33.3	0.4	6. 2
6	Use accounted for in Canada, including waste	66.7	99.6	93.8
7	Waste accounted for	0.6	-	1
8	Use accounted for in Canada, net of waste	66.1	99.6	93.8
9	Used for manufacture of fuel or electricity	15.7	99.6	21.9
10	(1) Coal mines	2.8	_	man.
11	(2) Coal briquette plants at mines	0.3	Marine.	-
12	(3) Natural gas industry	1	-	0.3
13	(4) Oil wells	1	-	19. 2
14	(5) Coke and gas plants	10.8	_	_
15	(6) Petroleum products industry	0.3	99.6	***
16	(7) Central electric stations	1.5	-	2. 4
17	Measured portion of use outside the energy-producing sector.	4	-	71.9
18	Use accounted for as raw materials	0.1	-	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	4	_	71.9
20	(1) Households	4	- )	
21	(2) Commercial	4	_ }	52. 5 <sup>3</sup>
22	(3) Manufacturers	20.2	_	16.0
23	(4) Mines	0.8	_	1
24	(5) Transportation	28.7		3. 4
25	(6) Non-assignable	_	_	_

Less than 0.05 per cent.
 Excludes blast furnace gas.

TABLE 6. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1929

Coke	(per cent of supply available in Canada)									
29.6       —       27.7       16.6       —0.3       —8.1       2         —       —       —       —       —       —       3         100.0       100.0       100.0       100.0       100.0       4         56.9       41.1       2.1       23.4       92.4       86.1       5         43.1       58.9       97.9       76.6       7.6       13.9       6         —       —       —       —       —       —       7       7         43.1       58.9       97.9       76.6       7.6       13.9       8         6.7       23.2       1       14.2       1       1.2       9         —       —       1       1       0.8       10         —	Coke (except pitch coke)	Manufactured gas <sup>2</sup>	Gasoline and naphtha	petroleum	wood waste	Electricity	No.			
29.6       —       27.7       16.6       —0.3       —8.1       2         —       —       —       —       —       —       3         100.0       100.0       100.0       100.0       100.0       4         56.9       41.1       2.1       23.4       92.4       86.1       5         43.1       58.9       97.9       76.6       7.6       13.9       6         —       —       —       —       —       —       7       7         43.1       58.9       97.9       76.6       7.6       13.9       8         6.7       23.2       1       14.2       1       1.2       9         —       —       1       1       0.8       10         —       —       1       1       0.8       10         —       —       1       1       1       1       1         —       —       1       0.1       1       1       1       1         —       —       1       0.1       1       1       1       1       1       1       1       1       1       1       1       1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
100.0 100.0 100.0 100.0 100.0 100.0 100.0 4  56.9 41.1 2.1 23.4 92.4 86.1 5  43.1 58.9 97.9 76.6 7.6 13.9 6  7  43.1 58.9 97.9 76.6 7.6 13.9 8  6.7 23.2 1 14.2 1 1.2 9  1 1 1 0.8 10  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	70.4	100.0	72. 3	83.4	100.3	108. 1	1			
100.0       100.0       100.0       100.0       100.0       100.0       100.0       4         56.9       41.1       2.1       23.4       92.4       86.1       5         43.1       58.9       97.9       76.6       7.6       13.9       6         -       -       -       -       -       -       7       7         43.1       58.9       97.9       76.6       7.6       13.9       8         6.7       23.2       1       14.2       1       1.2       9         -       -       1       1       0.8       10         -       -       1       1       0.8       10         -       -       1       1       1.2       9         -       -       1       1       0.8       10         -       -       -       -       -       11         1       -       -       -       -       11         2       -       1       0.1       1       1       13         3       0.6       7.4       1       10.4       1       0.2       15         -       -<	29.6	-	27. 7	16.6	-0.3	-8.1	2			
56.9     41.1     2.1     23.4     92.4     86.1     5       43.1     58.9     97.9     76.6     7.6     13.9     6       -     -     -     -     -     -     7       43.1     58.9     97.9     76.6     7.6     13.9     8       6.7     23.2     1     14.2     1     1.2     9       -     -     1     1     1     0.8     10       -     -     -     1     1     1     0.8     10       -     -     -     -     -     11     1     1     12     9       -     -     -     -     -     -     -     11     1				_	_		3			
43.1       58.9       97.9       76.6       7.6       13.9       6         -       -       -       -       -       -       7         43.1       58.9       97.9       76.6       7.6       13.9       8         6.7       23.2       1       14.2       1       1.2       9         -       -       -       1       1       0.8       10         -       -       -       -       -       -       11       1<	100.0	100.0	100.0	100.0	100.0	100.0	4			
-       -	56.9	41.1	2. 1	23. 4	92.4	86. 1	5			
43.1       58.9       97.9       76.6       7.6       13.9       8         6.7       23.2       1       14.2       1       1.2       9         -       -       -       1       1       1       0.8       10         -       -       -       -       -       -       11       1       12         -       -       -       -       -       1 </td <td>43.1</td> <td>58.9</td> <td>97.9</td> <td>76. 6</td> <td>7.6</td> <td>13.9</td> <td>6</td>	43.1	58.9	97.9	76. 6	7.6	13.9	6			
6.7 23.2 1 14.2 1 1.2 9  1 1 1 1 1 0.8 10  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	_	-	_	-		7			
1 1 1 1 0.8 10 1 1 1 1 1 1 0.8 10 1 1 1 1 1 1 12 1 1 0.1 1 1 1 13 6.1 15.8 1 1 1.6 - 0.2 14 0.6 7.4 1 1 10.4 1 0.2 15 1 2.1 16  4 4 97.9 4 4 4 4 17  29.7 - 1 1 1 1 1 - 18  4 4 4 - 4 4 4 20 4 4 4 - 4 4 4 21 6.6 35.0 0.3 15.0 6.5 4 22 0.1 0.3 0.1 0.7 0.7 3.5 23 - 78.6 38.0 0.4 3.2 24	43.1	58.9	97.9	76.6	7.6	13.9	8			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6.7	23. 2	1	14.2	1	1. 2	9			
1	-		1	1	1	0.8	10			
1 0.1 1 1 13 6.1 15.8 1 1.6 - 0.2 14 0.6 7.4 1 10.4 1 0.2 15 1 2.1 - 16  4 4 97.9 4 4 4 4 17 29.7 - 1 1 1 1 - 18  4 4 97.9 4 4 4 4 19 4 4 - 4 4 4 20 4 4 4 4 21 6.6 35.0 0.3 15.0 6.5 4 22 0.1 0.3 0.1 0.7 0.7 3.5 23 - 78.6 38.0 0.4 3.2 24	_		-	_		_	11			
6.1	1	_	-		1	1	12			
0.6       7.4       1       10.4       1       0.2       15         -       -       1       2.1       -       -       16         4       4       97.9       4       4       4       17         29.7       -       1       1       1       -       18         4       4       4       4       4       4       19         4       4       4       4       4       20         4       4       4       4       4       21         6.6       35.0       0.3       15.0       6.5       4       22         0.1       0.3       0.1       0.7       0.7       3.5       23         -       -       78.6       38.0       0.4       3.2       24		andone,	1	0.1	1	1	13			
-       -       1       2.1       -       -       16         4       4       97.9       4       4       4       17         29.7       -       1       1       1       -       18         4       4       4       4       4       4       19         4       4       4       4       4       4       20         4       4       4       4       4       21         6.6       35.0       0.3       15.0       6.5       4       22         0.1       0.3       0.1       0.7       0.7       3.5       23         -       78.6       38.0       0.4       3.2       24	6. 1	15.8	1	1.6		0.2	14			
4 4 97.9 4 4 4 17  29.7 — 1 1 1 1 — 18  4 4 97.9 4 4 4 19  4 4 97.9 4 4 4 4 20  4 4 4 21  6.6 35.0 0.3 15.0 6.5 4 22  0.1 0.3 0.1 0.7 0.7 3.5 23  — 78.6 38.0 0.4 3.2 24	0.6	7. 4	1	10.4	1	0. 2	15			
29.7 — 1 1 1 1 — 18  4 4 97.9 4 4 4 19  4 4 4 20  4 4 4 21  6.6 35.0 0.3 15.0 6.5 4 22  0.1 0.3 0.1 0.7 0.7 3.5 23  — 78.6 38.0 0.4 3.2 24	-	_	1	2. 1	-	_	16			
4 4 97.9 4 4 4 19 4 4 - 4 4 4 20 4 4 4 4 21 6.6 35.0 0.3 15.0 6.5 4 22 0.1 0.3 0.1 0.7 0.7 3.5 23 - 78.6 38.0 0.4 3.2 24	4	4	97.9	4	4	4	17			
4     4     4     4     4     20       4     4     4     4     4     21       6.6     35.0     0.3     15.0     6.5     4     22       0.1     0.3     0.1     0.7     0.7     3.5     23       -     -     78.6     38.0     0.4     3.2     24	29.7	-	1	1	1	-	18			
4     4     -     4     4     4     20       4     4     -     4     4     4     21       6.6     35.0     0.3     15.0     6.5     4     22       0.1     0.3     0.1     0.7     0.7     0.7     3.5     23       -     -     78.6     38.0     0.4     3.2     24		4	97. 9	4	4	4	19			
4 4 4 21 6.6 35.0 0.3 15.0 6.5 4 22 0.1 0.3 0.1 0.7 0.7 3.5 23 - 78.6 38.0 0.4 3.2 24						4	20			
6.6     35.0     0.3     15.0     6.5     4     22       0.1     0.3     0.1     0.7     0.7     3.5     23       -     -     78.6     38.0     0.4     3.2     24					4	4	21			
0.1     0.3     0.1     0.7     0.7     3.5     23       -     -     78.6     38.0     0.4     3.2     24					6.5	4	22			
78.6 38.0 0.4 3.2 24					0.7	3. 5	23			
	0.1				0.4	3. 2	24			
_ 0.4 18.9 25					_		25			

Includes use by private well owners in Ontario.
 Cover not sufficiently complete to justify publication of a percentage.

TABLE 7. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1933

		Coal	Crude petroleum	Natural gas
No.				
1	Production in Canada	52. 2	4.0	99.9
2	Net imports	48.9	96.0	0.1
3	Net decrease in measured stocks	-1.1	-	don
4	Apparent supply available in Canada	100.0	100.0	100.0
5	Use unaccounted for	40. 2	- 3. 4	14.1
6	Use accounted for in Canada, including waste	59.8	103.4	85.9
7	Waste accounted for	1.0	-	
8	Use accounted for in Canada, net of waste	58.8	103.4	85, 9
9	Used for manufacture of fuel or electricity	15.8	103.4	11.7
10	(1) Coal mines	3.0	_	_
11	(2) Coal briquette plants at mines	0.1	-	-
12	(3) Natural gas industry	1	_	0.3
13	(4) Oil wells	1	-	7.1
14	(5) Coke and gas plants	10.9	_	
15	(6) Petroleum refineries	0.1	103.4	3.0
16	(7) Central electric stations	1,7	areass	1.3
17	Measured portion of use outside the energy-producing sector	7	-	74.2
18	Use accounted for as raw materials	0.1	_	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	7	_	74.2
20	(1) Households	7	_	)
21	(2) Commercial	7	_	61.48
22	(3) Manufacturers	16.6	_	10.5
23	(4) Mines	0.4	_	0.1
24	(5) Transportation	25. 2	_	2.2
25	(6) Other	_	_	_
26	(7) Non-assignable	_	_	_

Less than 0.05 per cent.
 Excludes blast furnace gas.
 Includes some naphtha.
 Includes line losses.

TABLE 7. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1933

(per cent of supply available in Canada)

		(per cent of	supply available	e in Canada)			
Coke (except petroleum coke and pitch coke)	Petroleum coke	Manufactured gas <sup>2</sup>	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	No.
75.2	77.2	100.0	97.2	93. 0 <sup>3</sup>	100.4	100.0	1
24.8	22.8	-	2.8	12.8	-0.4	1	2
_	_	_	_	- 5. 8	_		3
100.0	100.0	100.0	100.0	100.0	100.0	100.0	4
18.7	62.9	43.4	- 2, 3	5. 6	93.1	1.7	5
81.3	37.1	56.6	102,3	94.4	6.9	98.3	6
-	_	_	_	_	_	_	7
81.3	37.1	56.6	102.3	94.4	6.9	98.3	8
9.4	7	32, 8	0.1	12.8	1	1.1	9
-	_		1	1		0.7	10
_	_	_		_		_	11
_	_ :	_	1	1	_	1	12
_		_	1	1	1	1	13
9.4		22.0	1	1.9	_	0.1	14
_	7	10.8	1	10.4	1	0.3	15
_	_		1	0.5	_	-	16
7	7	7	102. 2	81.6	7	97.2	17
15, 2	7	-	1	1	1	-	18
7	7	7	102.2	81.6	7	97.2	19
7	7	7	_	22.2	7	8.8	20
7	7	7	-		7	4.0	21
7.6	7	23, 4	0.2	21.0	6.1	58.5	22
1	7	1	0.1	0.8	0.7	3. 2	23
_	7	_	90.3	37.6	0.1	21.64	24
	_	_	_	_	_	1.05	25
_	_	0.4	11.6	Marris	_	0.16	26

Street lighting.
 Free service (other than street lighting).
 Cover not sufficiently complete to justify publication of a percentage.
 Includes use by private well owners in Ontario.

TABLE 8. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1939

(per cent of supply available in Canada)

No.		Coal	Crude petroleum	Natural gas
1	Production in Canada	51. 8	17. 0	100.5
2	Net imports	44. 5	82. 7	05
3	Net decrease in measured stocks	3, 7	0. 3	-0.5
4	Apparent supply available in Canada	100.0	100.0	100.0
5	Use unaccounted for	37. 4	0. 6	10.0
6	Use accounted for in Canada, including waste	62. 6	99. 4	90.0
7	Waste accounted for	1. 2	0.110	_
8	Use accounted for in Canada, net of waste	61. 4	99.3	90.0
9	Used for manufacture of fuel or electricity	14. 5	99. 3	23. 4
10	(1) Coal mines	2. 0	_	-
11	(2) Coal briquette plants at mines	0.1	_	
12	(3) Natural gas industry	1	_	0.4
13	(4) Oil wells	1	_	17. 6
14	(5) Coke and gas plants	10.9	_	_
15	(6) Petroleum refineries	1	99. 3	4. 5
16	(7) Central electric stations	1. 5	-	0.9
17	(8) Other	_	_	_
18	Measured portion of use outside the energy-producing sector	11	_	66.6
19	Use accounted for as raw materials	0.3	_	_
20	Measured portion of use as fuel or electricity outside the energy-producing sector	11	_	66. 6
21	(1) Households	11	_	52. 6 <sup>2</sup>
22	(2) Commercial	11	_	52.6
23	(3) Manufacturers	18. 3	_	12. 1
24	(4) Mines	1. 1		0.1
25	(5) Transportation	26. 6	_	1.83
26	(6) Other	_	_	_
27	(7) Non-assignable	-	-	

Less than 0.05 per cent.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Excludes blast furnace gas.
 Accounted for but not sold.
 There may be some double-counting between transportation and either manufacturers or mines, or both.

TABLE 8. Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada as a Percentage of the Apparent Supply, 1939

(per cent of supply available in Canada)

Coke (except petroleum coke and pitch coke)	Petroleum coke	Manu- factured gas4	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	No
83. 9	29. 0	100.0	95. 6	93. 3	100.6	106. 6	1
16. 1	49. 0	-	8. 5	9. 3	-0.6	-6.6	2
	22. 0	-	-4.1	- 2, 6	-	-	3
100.0	100. 0	100.0	100.0	100.0	100.0	100.0	4
32. 0	36.0	11.0	-2.7	1. 1	94. 4	3. 0	5
68. 0	64.0	89.0	102.7	98.9	5, 6	97.0	6
	_	_	-	-	_	_	7
68. 0	64. 0	89.0	102.7	98.9	5. 6	97. 0	8
8. 3	1.8	47.7	0. 1	11.0	1	1.0	9
	_	_	1	1		0.6	10
winte	_	_	-	_	_	-	11
_			1	1	1	1	12
-	_		1	0.1	1	1	13
8. 3	-	31. 9	1	0.6	1	0. 2	
-	1, 8	15. 8	1	9.0	1	0.2	15
-		-	1	1. 2	_	_	16
	-	e e	-	0. 1		_	11
11	11	, 11	102. 6	87. 9	11	96.0	18
33. 1	47.9	-	1	1	1	-	19
11	11	11	102. 6 <sup>6</sup>	87. 9	11	96.0	
11	11	11	-	23. 4	11	8.0	
11	11	11	_	10.4	11	3, 8 66, 5	
15. 4	11	40.4	0.76	19. 4	4. 5 0. 9	5. 4	1
0.3	11	0.3	0. 26	1. 6 43. 5	0. 9	11. 58	
-	-	0.1	85. 3 <sup>6</sup>	43, 5	-	0.7	
_	-	- 0. 5 <sup>5</sup>	- 16.4 <sup>7</sup>	_	_	0.19	

Gasoline untaxed but accounted for.
 Includes line losses.
 Free service.
 Excluding Ontario.
 Cover not sufficiently complete to justify publication of a percentage.

1 ABLE 9. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

No.		Coal	Crude petroleum	Natural and manufactured gas <sup>1</sup>
1	Production in Canada	401,443	2,169	35,954
2	Net imports	455,184	93,398	119
3	Net decrease in measured stocks	-39,814	-	-
4	Apparent supply available in Canada	816,813	95,567	36,073
5	Use unaccounted for	8	-3,962	8
6	Use accounted for in Canada including waste	8	99,529	8
7	Waste accounted for	7,211	-	_
8	Use accounted for in Canada, net of waste	8	99,529	8
9	Use accounted for in manufacture of fuel and electricity	119,930	99,529	6,442
10	(1) Coal mines	23,922	-	
11	(2) Coal briquette plants at mines	279	_	_
12	(3) Natural gas industry	68	-	101
13	(4) Oïl wells	81	-	956
14	(5) Coke and gas plants	79,381	-	3,247
15	(6) Petroleum products industry	4,428	99,529	1,312
16	(7) Central electric stations	11,771		826
17	Measured portion of use outside the energy-producing sector	8	-	8
18	Use accounted for as raw material	649	-	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	8	_	8
20	(1) Households	8	_	8
21	(2) Commercial	8	_	8
22	(3) Manufacturers	160,111	_	8,538
23	(4) Mines	5,779	_	3
24	(5) Transportation	270,941	_	1,101
25	(6) Non-assignable	_	_	28'

Excludes blast furnace gas.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Accounted for but not sold.

TABLE 9. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

Coke (except pitch coke)	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.
						1
51,965	33,570	48,786	192, 123	41 070		
23,187	11,846	17,075		41,378	6	1
20,101	11,040	11,015	- 233	-5,120	595,456	2
75, 152	45,416	65,861	191,890		-39,814	3
10, 102	10,110	03,001	191,090	36,258	6	4
8	8	8	8	8		5
		0	٥	8	6	9
8	8	8	8	8	6	6
eron.		_		_	7,211	7
8	. 8	8	8	8	6	8
	, 0	Ü	Ü	0	0	
4,197	68	9,273	2	547	6	9
_	avele	_	diente.	391	24,313	10
energia de la companya de la company	_	_	_		279	11
	_	14	_	7	183	12
_	1	31	2	6	1,077	13
3,829	11	2,066	_	89	6	14
368	5	6,944	7	60	6	15
7	51	218	_	4000	12,866	16
8	8	8	8	8	8	17
			70		27,858	18
27, 114	2	23	70		21,838	10
8	8	8	8	8	8	19
8	8	8	8	8	8	20
8	8	8	8	8	8	21
10,507	358 <sup>5</sup>	11,820	14,442	8	8	22
107	67 <sup>5</sup>	441	2,459	1,443	10,299	23
_	8	8	774	8	8	24
Acres .	_	_	-	-	28	25

<sup>5.</sup> There may be some double-counting between transportation and either manufacturers or mines, or both.
6. This line cannot be added up without double-counting.
7. Less than 0.5 billion.
8. B.t.u. conversion not computed.

TABLE 10. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

No.		Coal	Crude petroleum	Natural gas
110.				
1	Production in Canada	423, 408	6, 648	28, 378
2	Net imports	476, 140	176, 414	133
3	Net decrease in measured stocks	-11, 209	110, 111	155
4	Apparent supply available in Canada	888, 339	183, 062	28, 511
5	Use unaccounted for	3	682	1, 756
6	Use accounted for in Canada, including waste	3	182, 380	26, 755
7	Waste accounted for	6,054	-	1
8	Use accounted for in Canada, net of waste	3	182, 380	26,754
9	Used for manufacture of fuel or electricity	141, 485	182, 380	6, 245
10	(1) Coal mines	24, 802	-	_
11	(2) Coal briquette plants at mines	1,978	-	-
12	(3) Natural gas industry	48	-	83
13	(4) Oil wells	183	-	5, 489
14	(5) Coke and gas plants	101, 433		_
15	(6) Petroleum products industry	2, 265	182, 380	-
16	(7) Central electric stations	10,776	-	673
17	Measured portion of use outside the energy-producing sector	3	-	20, 509
18	Use accounted for as raw materials	542	-	-
19	Measured portion of use as fuel or electricity outside the energy-producing sector	3		20, 509
20	(1) Households	3	_	)
21	(2) Commercial	3	_	} 14, 982 <sup>6</sup>
22	(3) Manufacturers	188, 312	_	4, 558
23	(4) Mines	7, 286	_	3
24	(5) Transportation	270, 138	_	966
25	(6) Non-acsignable	-	_	_

Less than .5 billion.
 Excludes blast furnace gas.
 B.t.u. conversion not computed.

TABLE 10. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

			J.G TO SHOTTING				
Coke (except pitch coke)	Manufactured gas2	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.
69, 678	21, 033	66, 584	84,671	202 400	CC 574		
29, 352	21, 033	25, 547	16, 809	203, 499 - 530	66, 574	5 718, 888	1
29, 302		20, 541	10, 809		-4,911	-11, 209	3
99, 030	21, 033	92, 131	101, 480	202, 969	61, 597	5	4
33, 030	21,000	<i>32</i> , 131	101, 400	202, 505	01, 091	5	7
3	3	1,947	3	3	3	5	5
			-				
3	3	90, 184	3	3	3	5	6
_	_	_		_	_	6,055	7
3	3	90, 184	3	3	3	5	8
6, 646	4, 888	36	14, 392	53	749	5	9
	_	2	1	40	509	25, 353	10
-	_	_	_	_	-	1, 978	11
1	_	_	_	1	1	131	12
_		7	58	13	8	5, 758	13
6, 044	3, 318	1	1,592	_	137	5	14
602	1, 570	11	10, 574	1	95	5	15
_	_	16	2, 168	_	-	13, 633	16
3	3	90, 148	3	3	3	3	17
3		00, 110					
29, 367	-	3	25	19	_	29, 956	18
20,000							
						2	19
3	3	90, 145	3	3	3	3	20
3	3	-	3	3	3	3	21
3	3	_	3	3	3	3	22
6, 561	7, 361	257	15, 195	13, 119 1, 462	3 2, 164	11,876	23
88	63	109	701	714	1, 9584	384, 776	24
-	-	72, 407	38, 593	119	1, 550	17, 461	25
-	89	17,372					

Includes line losses on exports.
 This line cannot be added up without double-counting.
 Includes use by private well owners in Ontario.

TABLE 11. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1933

No.		Coal	Crude petroleum	Natural gas	Coke (except petroleum coke and pitch coke)
190.					
1	Production in Canada	279, 888	6, 815	23, 138	44, 304
2	Net imports	298, 435	164, 803	26	14, 599
3	Net decrease in measured stocks	- 7, 052	_	_	_
4	Apparent supply available in Canada	571, 271	171, 618	23, 164	58, 903
5	Use unaccounted for	7	<b>-</b> 5, 898	3, 253	7
6	Use accounted for in Canada, including waste	7	177, 516	19, 911	7
7	Waste accounted for	5, 671		_	_
8	Use accounted for in Canada, net of waste	7	177, 516	19,911	7
9	Used for manufacture of fuel or electricity	95, 245	177, 516	2, 727	5, 554
10	(1) Coal mines	17, 449	_	_	_
11	(2) Coal briquette plants at mines	418	_	_	_
12	(3) Natural gas industry	77	_	79	-
13	(4) Oil wells	2	-	1, 645	_
14	(5) Coke and gas plants	67, 324	_	_	5, 554
15	(6) Petroleum refineries	659	177, 516	690	_
16	(7) Central electric stations	9, 316	_	313	_
17	Measured portion of use outside the energy-producing sector	7	-	17, 184	7
18	Use accounted for as raw materials	540	_	_	8, 928
19	Measured portion of use as fuel or electricity outside the energy-producing sector	7	-	17, 184	7
20	(1) Households	7	_	14, 2318	7
21	(2) Commercial	7	_	11, 201	7
22	(3) Manufacturers	100, 098	-	2, 429	4, 498
23	(4) Mines	2, 715	_	11	15
24	(5) Transportation	155, 425	_	513	-
25	(6) Other	_	_	_	-
26	(7) Non-assignable	_	_	-	-

Less than 0.5 billion.
 Excludes blast furnace gas.
 Includes some naphtha.
 Includes line losses.

TABLE 11. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 19.33

Petroleum coke	Manufactured gas <sup>2</sup>	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No
							110
2, 251	16, 315	68, 543	87, 2723	180, 248	63, 792	9	1
665	_	1, 962	12,054	- 682	12	491, 874	2
-	_		- 5, 495		_	- 12, 547	3
2, 916	16, 315	70, 505	93, 831	179, 566	63, 804	9	4
7	7	- 1, 633	5, 278	7	1,042	7	5
7	7	72, 138	88, 553	7	62, 762	7	6
-	_	_	-	-	_	5, 671	7
7	7	72, 138	88, 553	7	62, 762	9	8
7	5, 343	41	12, 029	2	723	9	9
_	_	7	2	-	458	17, 916	10
-	_	_	_	-	-	418	11
_	_	3	1	-	1	160	12
-	-	1	6	2	11	1, 665	13
_	3, 588	1	1, 799	-	79	9	14
7	1, 755	23	9, 754	1	175	9	15
-	-	7	467	-	-	10, 103	16
7	7	72, 097	76, 524	7	62, 039	7	17
7	-	1	16	3	-	7	18
7	7	72, 096	76, 508	7	62, 039	7	19
7	7	_	20, 857	7	5, 631	7	20
7	7	_	-	7	2, 547	7	21
7	3, 821	161	19, 729	10, 993	37, 323	179, 052	22
7	1	93	774	1, 284	2, 066	6, 958	23
7	_	63, 676	35, 148	209	13, 785	268 <b>,</b> 756 <sup>4</sup>	24
_		-		-	630	630 <sup>5</sup>	
	67	8, 166	_	_	57	8, 290 <sup>6</sup>	26

Street lighting.
 Free service (other than street lighting).
 B.t.u. conversion not computed
 Includes use by private well owners in Ontario.
 This line cannot be added up without double-counting.

TABLE 12. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

2 Net imports		(SITIONS OF	2.0.0.7			
2   Net imports	No.		Coal			(except petroleum coke and
2   Net imports						
2   Net imports						
Net decrease in measured stocks	1	Production in Canada	382,082	46, 567	35, 185	60, 252
Apparent supply available in Canada	2	Net imports	359,874	227, 335	- 19	11, 584
5 Use unaccounted for	3	Net decrease in measured stocks	29, 763	825	- 165	_
6 Use accounted for in Canada including waste	4	Apparent supply available in Canada	771, 719	274,727	35, 001	71, 836
The control of the	5	Use unaccounted for	13	1,763	3, 514	13
State   Use accounted for in Canada, net of waste   13   272,703   31,487   13	6	Use accounted for in Canada including waste	13	272, 964	31, 487	13
9 Use accounted for in manufacture of fuel and electricity	7	Waste accounted for	9, 216	261 <sup>1</sup>	_	_
tricity	8	Use accounted for in Canada, net of waste	13	272, 703	31, 487	13
10	9	Use accounted for in manufacture of fuel and elec-				
11   (2) Coal briquette plants at mines		tricity	116, 519	272, 703	8, 201	5, 963
12   (3) Natural gas industry	10	(1) Coal mines	15, 266	-	_	_
13	11	(2) Coal briquette plants at mines	1, 185	_	-	-
14       (5) Coke and gas plants       89,000       —       —       5,963         15       (6) Petroleum refineries       315       272,703       1,560       —         16       (7) Central electric stations       10,673       —       327       —         17       (8) Other       —       —       —       —       —         18       Measured portion of use outside the energy-producing sector       13       —       23,286       13         19       Use accounted for as raw materials       2,053       —       —       23,770         20       Measured portion of use as fuel or electricity outside the energy-producing sector       13       —       23,286       13         21       (1) Households       13       —       23,286       13         22       (2) Commercial       13       —       23,286       13         23       (3) Manufacturers       146,476       —       4,226       11,096         24       (4) Mines       7,608       —       41       196         25       (5) Transportation       215,536       —       —       —       —         26       (6) Other       —       —       —       —				-	155	_
15   (6) Petroleum refineries   315   272,703   1,560   -     16   (7) Central electric stations   10,673   -   327   -     17   (8) Other   -   -   -   -     18   Measured portion of use outside the energy-producing sector   13   -   23,286   13     19   Use accounted for as raw materials   2,053   -   -   23,770     20   Measured portion of use as fuel or electricity outside the energy-producing sector   13   -   23,286   13     21   (1) Households   13   -   318,4082   13     22   (2) Commercial   13   -   318,4082   13     23   (3) Manufacturers   146,476   -   4,226   11,096     24   (4) Mines   7,608   -   41   196     25   (5) Transportation   215,536   -   6113   -     26   (6) Other   -   -   -   -     27   700   -   -   -     28   700   -   -     29   700   -   -     20   700   -   -     21   700   -     22   700   -     23   700   -     24   (4) Mines   7,608   -   41   196     25   (5) Transportation   215,536   -   6113   -     26   (6) Other   -   -   -   -     27   700   -     28   700   -     29   700   -     700   700   700   700     700   700   700   700     700   700   700   700     700   700   700   700     700   700   700   700     700   700   700   700     700   700   700     700   700   700   700			[	-	6, 159	
16       (7) Central electric stations       10,673       —       327       —         17       (8) Other       —       —       —       —       —         18       Measured portion of use outside the energy-producing sector       13       —       23,286       13         19       Use accounted for as raw materials       2,053       —       —       23,770         20       Measured portion of use as fuel or electricity outside the energy-producing sector       13       —       23,286       13         21       (1) Households       13       —       )       18,4082       13         22       (2) Commercial       13       —       )       18,4082       13         23       (3) Manufacturers       146,476       —       4,226       11,096         24       (4) Mines       7,608       —       41       196         25       (5) Transportation       215,536       —       6113       —         26       (6) Other       —       —       —       —	~ -			done	****	5, 963
17 (8) Other — — — — — — — — — — — — — — — — — — —		1		272, 703		-
18       Measured portion of use outside the energy-producing sector       13       —       23, 286       13         19       Use accounted for as raw materials       2,053       —       —       23,770         20       Measured portion of use as fuel or electricity outside the energy-producing sector       13       —       23,286       13         21       (1) Households       13       —       )       13       —         22       (2) Commercial       13       —       )       18,4082       13         23       (3) Manufacturers       146,476       —       4,226       11,096         24       (4) Mines       7,608       —       41       196         25       (5) Transportation       215,536       —       6113       —         26       (6) Other       —       —       —       —			10,673	_	327	-
Sector   13	17	(8) Otner	-		_	_
20 Measured portion of use as fuel or electricity outside the energy-producing sector 13 - 23,286 13 21 (1) Households 13 - 318,4082 13 22 (2) Commercial 13 - 318,4082 13 23 (3) Manufacturers 146,476 - 4,226 11,096 24 (4) Mines 7,608 - 41 196 25 (5) Transportation 215,536 - 6113 - 26 (6) Other	18		13	-	23, 286	13
the energy-producing sector 13 - 23,286 13 21 (1) Households 13 - 18,4082 13 22 (2) Commercial 13 - 18,4082 13 23 (3) Manufacturers 146,476 - 4,226 11,096 24 (4) Mines 7,608 - 41 196 25 (5) Transportation 215,536 - 6113 - 26 (6) Other	19	Use accounted for as raw materials	2,053	_	-	23, 770
21     (1) Households     13     -     18,4082     13       22     (2) Commercial     13     -     18,4082     13       23     (3) Manufacturers     146,476     -     4,226     11,096       24     (4) Mines     7,608     -     41     196       25     (5) Transportation     215,536     -     6113     -       26     (6) Other     -     -     -     -	20	Measured portion of use as fuel or electricity outside the energy-producing sector	13	_	23 286	13
22     (2) Commercial     13     —     ] 18, 4082     13       23     (3) Manufacturers     146, 476     —     4, 226     11, 096       24     (4) Mines     7, 608     —     41     196       25     (5) Transportation     215, 536     —     6113     —       26     (6) Other     —     —     —     —	21			_	)	
23     (3) Manufacturers     146, 476     —     4, 226     11, 096       24     (4) Mines     7, 608     —     41     196       25     (5) Transportation     215, 536     —     611³     —       26     (6) Other     —     —     —     —					18, 4082	
24     (4) Mines     7,608     -     41     196       25     (5) Transportation     215,536     -     611 <sup>3</sup> -       26     (6) Other     -     -     -     -					4, 226	11, 096
26 (6) Other	24					196
26 (6) Other	25	(5) Transportation	215, 536	_	6113	_
27 (7) Non-assignable	26		-	_	-	
	27	(7) Non-assignable	_	_	_	_

Excluding Ontario.
 Includes use by private well owners in Ontario.
 Pipeline losses in Ontario.
 Excludes blast furnace gas.
 Accounted for but not sold.
 There may be some double-counting between transportation and either manufacturers or mines or both.
 Gasoline untaxed but accounted for.

TABLE 12. Energy Equivalent of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

(difficult of B.c.u.)								
Petroleum'	Manufactured gas <sup>4</sup>	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.	
1,998	24,737	112, 317	109, 402	211,719	105, 659	11	1	
3, 376		9,994	10,928	-1,312	-6,532	615, 228		
1,510		-4,793	-3,043	-, -	-	11	3	
6,884	24,737	117, 518	117, 287	210, 407	99, 127	11	4	
3,000			111, 201	210, 101	00,121		_ ^	
13	13	- 3, 115	1,314	13	2,995	11	5	
13	13	120, 633	115,973	13	96, 132	11	6	
_	-	_	-	-	-	9,477	7	
13	13	120, 633	115,973	13	96, 132	11	8	
128	11,804	69	12,827	30	977	11	9	
_	_	17	8	_	617	15, 908	10	
_	_	_	_ :	_	_	1, 185	11	
_	_	5	1	12	12	168		
_	_	11	106	27	7	6, 384	13	
_	7,905	3	735	12	141	11	14	
128	3, 899	29	10, 496	3	212	11	15	
120	5,055	4	1, 378	_	_	12, 382	1	
			103	_	_	103		
13	13	120, 564	103, 146	13	95, 155	13	18	
13	13	120,001						
				4.1		29, 166	10	
3, 294	_	12	8	41		23, 100	13	
							1	
13	13	120, 564 <sup>6</sup>	103, 138	13	95, 155	13	20	
13	13	_	27, 490	13	7, 885	13	21	
13	13	_	-	13		13	22	
13	9,997	7916	22, 736	9, 503	65,944	270, 769		
13	77	286 <sup>6</sup>	1,901	1,960	5, 386	17, 455		
_	20	100, 219 <sup>6</sup>	51,011	161	11,4028	378, 960		
_	_	_	_	_	69610	696	1	
_	1165	19,-268 <sup>7</sup>	-	_	58 <sup>9</sup>	19,442	27	

Includes line losses.
 Free service.
 Street lighting.
 This line cannot be added up without double-counting.
 Less than 0.5 billion.
 B.t.u. conversion not computed.

TABLE 13. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

No.		Coal	Crude petroleum	Natural and manufactured gas <sup>2</sup>
1	Net imports	76.4	15.7	1
	Use accounted for in manufacture of fuel and electricity:			
2	(1) Coal mines	98.4	_	_
3	(2) Coal briquette plants at mines	100.0	_	-
4	(3) Natural gas industry	37. 1	_	55. 2
5	(4) Oil wells	7. 5	_	88. 7
6	(7) Central electric stations	91. 5	- `	6. 4
	Measured portion of use as fuel or electricity outside the energy-producing sector:			
7	(4) Mines	56. 1	-	1

TABLE 14. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

No.		Coal	Crude petroleum	Natural gas
1	Net imports	66. 2	24. 6	1
	Use accounted for in manufacture of fuel or electricity:			
2	(1) Coal mines	97.8	-	_
3	(2) Coal briquette plants at mines	100.0	-	-
4	(3) Natural gas industry	36.6	-	63.4
5	(4) Oil wells	3. 2	_	95. 4
6	(7) Central electric stations	79.0	_	5.0
	Measured portion of use as fuel or electricity outside the energy-producing sector:			
7	(4) Mines	61.4	_	1
8	(5) Transportation	70.2	_	0.3

Less than 0.05 per cent.
 Excludes blast furnace gas.
 There may be some double-counting between transportation and either manufacturers or mines or both.

Less than 0.05 per cent.
 Excludes blast furnace gas.
 Includes line losses on exports.

TABLE 13. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1926

Coke (except pitch coke)	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.			
3.9	2.0	2.9	1	-0.9	100.0	1			
1	- - 0. 1 0. 4	7.6 2.9 1.7	  0.2	1. 6 - 0. 1 0. 6 -	100. 0 100. 0 100. 0 100. 0 100. 0	2 3 4 5 6			
1.0	0.73	4.3	23.9	14.0	100.0	7			

TABLE 14. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1929

(per cent of B.t.u. contribution to Canada total)											
Coke (except pitch coke)	Manufactured gas <sup>2</sup>			Electricity	Canada total	No.					
4. 1	-	3.6	2.3	- 0.1	- 0. 7	100.0	1				
-	-	1	1	0.2	2.0	100.0	2				
-	-	_		_	-	100.0	3				
1	-	-	_	1	1	100.0	4				
-	_	0.1	1.0	0.2	0.1	100.0	5				
_	_	0.1	15.9	_	_	100.0	6				
0.7	0.6	0.9	5.9	12.3	18.2	100.0	7				
-	-	18.8	10.0	0. 2	0.53	100.0	8				

TABLE 15. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1933

No.		Coal	Crude petroleum	Natural gas	Coke (except petroleum coke and pitch coke)
1	Net imports	60.7	33.5	i	3.0
2 3 4 5 6	Use accounted for in manufacture of fuel or electricity:  (1) Coal mines  (2) Coal briquette plants at mines  (3) Natural gas industry  (4) Oil wells  (7) Central electric stations	97. 4 100. 0 48. 1 0. 1 92. 2	- - - -	- 49.4 98.7 3.1	
7 8 9	Measured portion of use as fuel or electricity outside the energy-producing sector: (3) Manufacturers (4) Mines (5) Transportation	55.9 39.0 57.8	_ 	1.4 0.2 0.2	2.5 0.2 —

TABLE 16. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

No.		Coal	Crude petroleum	Natural gas	Coke (except petroleum coke and pitch coke)
1	Net imports	58.5	37.0	1	1.9
2 3 4 5 6	Use accounted for in manufacture of fuel or electricity:  (1) Coal mines  (2) Coal briquette plants at mines  (3) Nautral gas industry  (4) Oil wells  (7) Central electric stations	96.0 100.0 3.6 1.2 86.2	-	92.8 96.4 2.7	= = =
7	Use accounted for as raw materials	7.1		-	81.5
8 9 10	Measured portion of use as fuel or electricity outside the energy-producing sector; (3) Manufacturers (4) Mines (5) Transportation	54.1 43.6 56.9	_ _ _	1.6 0.2 0.2 <sup>4</sup>	4. 1 1. 1

Less than 0.05 per cent.
 Excludes blast furnace gas.

Less than 0.05 per cent.
 Excludes blast furnace gas.
 Some use by manufacturers or mines may be included with other coke.
 Pipeline losses in Ontario.

TABLE 15. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1933

Petroleum coke	Manufactured gas <sup>2</sup>	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.
0.1	-	0.4	2.4	- 0.1	1	100.0	1
- - - - -		1	0.6 0.4 4.6	- - 0,1	2.6 - 1 0.7	100.0 100.0 100.0 100.0	2 3 4 5 6
4 4	2. 1	0.1 1.3 23.7	11.0 11.1 13.1	6.1 18.5 0.1	20.9 29.7 5.1 <sup>3</sup>	100.0 100.0 100.0	7 8 9

<sup>3.</sup> Includes line losses.

TABLE 16. Percentage Distribution by Commodities of Selected Components of the Apparent Supply and Measured Portion of Distribution of Fuel and Electricity in Canada, 1939

Petroleum coke	Manufactured gas <sup>2</sup>	Gasoline and naphtha	Other petroleum fuels	Fuelwood and wood waste useable as fuel	Electricity	Canada total	No.
0.5	-	1.6	1.8	- 0.2	- 1.1	100.0	1
	- - - -	0.1 - 3.0 0.2	0.1 - 0.6 1.7 11.1	0.4	3.9 - 1 0.1	100.0 100.0 100.0 100.0 100.0	2 3 4 5 6
11.3	-	1	1	0.1	-	100.0	7
_ 3 _ 3 _	3.7 0.4	0.35 $1.75$ $26.45$	8.4 10.9 13.5	3.5 11.2	24.3 30.9 3.0 <sup>6</sup>	100.0 100.0 100.0	8 9 10

There may be some double-counting between transportation and either manufacturers or mines or both.
 Includes line losses.

<sup>4.</sup> Some use by manufacturers or mines may be included with other coke.

TABLE 17. Commodity Statement for Coal 1, 1926

(tons)

	(tons)			
Apparent available supply	Measured portion of distribution			
(a) Production	(k) Supplied to employees of coal mines			
held in bond 3				
1. Coal briquettes are included in imports, and probably in	(p) Sub-total, used for production of fuel or electricity			
some of the totals on the distribution side.  2. Figures are not comparable with those used for 1948 and 1952 in Reference Paper No. 69.  3. Excess of imports for consumption over landed imports. The resulting domestic supply is the same as if imports for consumption had been used at (b). This indirect approach is to maintain as much consistency as possible with later series.  4. This figure excludes inland bunkering and does not necessarily include all bunkering at seaports.	(u) Sub-total, used by non-fuel producing manufacturers and mines 6, 239, 297 (wl) Railroads, used by locomotives 9, 307, 687 (w4) Sold by mines for ships bunkers 4 727, 680 (x) Measured portion of domestic consumption, net of waste 20, 988, 941 (y) Waste at mines 267, 620 (z) Measured portion of domestic consumption, including waste 21, 256, 561			

## TABLE 18. Commodity Statement for Coal 1, 1929

(tons) Measured portion of distribution Apparent available supply (a) Production ..... 17, 496, 557 (k) Supplied to employees of coal 204, 581 (b) Landed imports 2 ..... 18, 619, 300 Used for producing fuel or elect-(c) Exports, including re-exports ... 842, 972 ricity: (p1) Coal mines 980,600 (d) Net imports((b) - (c))..... 17, 776, 328 (p2) Coal briquette plants at mines ..... 105, 635 1, 783 7, 920 (g) Imputed decrease in stocks (p3) Natural gas industry ..... held in bond<sup>3</sup> ..... -415, 137 (p4) Oil wells ..... 3, 712, 285 44, 496 (p5) Coke and gas plants: carbonized .. as fuel ..... (h) Apparent available domestic supply ((a) + (d) + (g)) ...... (p6) Petroleum products industry ...... 36, 857, 748 83,872 (p7) Central electric stations ..... 536, 178 Sub-total, used for production of fuel or electricity ..... 5, 472, 769 Used by manufacturing industry as 20, 115 raw material Used by non-fuel producing manufacturers as fuel ..... 7, 051, 005 Used by non-fuel producing mines, 1. Coal briquettes are included in imports, and probably in as fuel 271, 176 Sub-total, used by non-fuel producsome of the totals on the distribution side. 7, 342, 296 9, 640, 120 Figures are not comparable with those used for 1948 and ing manufacturers and mines ..... 1952 in Reference Paper No. 69. (w1) Railroads; fuel used by locomotives Excess of imports for consumption over landed imports. The (w4) Sold by mines for use in ships' bunkers 4 resulting domestic supply is the same as if imports for con-365, 422<sup>1</sup> 23, 025, 188 235, 284 sumption had been used at (b). This indirect approach is to (x)Domestic consumption, net of waste maintain as much consistency as possible with later series. Waste at mines ..... (y) This figure excludes inland bunkering and does not neces s-Measured portion of domestic con-(z)

sumption, including waste .....

23, 260, 472

arily include all bunkering at seaports.

TABLE 19. Commodity Statement for Coal<sup>1</sup>, 1933 (tons)

Apparent available supply					
	Measured portion of distribution				
(b) Landed imports 2	(k) Supplied to employees of coal mines				
<ol> <li>(h) Apparent available domestic supply ((a) + (d) + (g))</li></ol>	(p 5) Coke and gas plants: carbonized				

# TABLE 20. Commodity Statement for Coal<sup>1</sup>, 1939 (tons)

Apparent available supply		Measured portion of distribution				
(b) Landed imports <sup>2</sup> 13,884,816		(k) Supplied to employees of coal mines	185, 554			
(c) Exports, including re-exports 410,679 (d) Net imports ((b)-(c))		(p 1) Coal mines				
(h) Apparent available domestic supply ((a) + (d) + (g))	30, 280, 664	(p 5) Coke and gas plants:       3,271,326         1 as fuel       22,088         manufacture of water gas       2,882         (p 6) Petroleum refineries       11,650				
		(p 7) Central electric stations	4,410,079			
		(s) Used by non-fuel producing manufacturers, as fuel				
<ol> <li>Coal briquettes are included in imports, and some of the totals on the distribution side.</li> <li>Figures are not comparable with those used for</li> </ol>		(w1) Railroads: used by locomotives 6,867,119	5, 951, 678 7, 500, 284			
<ol> <li>1952 in Reference Paper No. 69.</li> <li>Excess of imports for consumption over landed i resulting domestic supply is the same as if imposumption had been used at (b). This indirect ap maintain as much consistency as possible with land the consistency as possible with land to the consistency as possible wi</li></ol>	imports. The orts for con-	bunkers 4	560, 793 8, 608, 388 351, 670			
4. This figure excludes inland bunkering, and does sarily include all bunkering at seaports.	s not neces-		8,960,058			

## TABLE 21. Commodity Account for Crude Petroleum, 1926

(thousands of imperial gallons)

Apparent available supply				Measured portion of distribution			
(a) Production (b) Imports (c) Exports	570,444 21,043	12,756	(p6)	Used at petroleum refineries: Crude oil in natural state: Canadian	12, 203 573, 263		
(d) Net imports ((b)-(c))		549, 401	(p)	Sub-total, used for production of fuel or electricity		585, 466	
(h) Apparent available domestic supply ((a) + (d))		562, 157	(X)	Apparent domestic consumption		585, 466	

TABLE 22. Commodity Account for Crude Petroleum, 1929

(thousands of imperial gallons)

Apparent available supply	Measured portion of distribution				
(a) Production	009		Used at petroleum refineries: Crude oil in natural state: Canadian	37, 338 1,035,490	
(h) Apparent available domestic supply ((a) + (d))	1, 076, 840	(1)	Apparent domestic consumption		1,072,828 1,072,828

TABLE 23. Commodity Account for Crude Petroleum, 1933

(thousands of imperial gallons)

Apparent available supply		Measured portion of distribution		
a) Production	980,090 10,659	40,087 969,431	(p6) Used at petroleum refineries:  Crude oil in natural state:  Canadian	
h) Apparent available domestic supply ((a) + (d))		1,009,518	Natural casinghead gasoline N.A.  (p) Sub-total, used for production of fuel or electricity	1, 044, 211

TABLE 24. Commodity Account for Crude Petroleum, 1939

(thousands of imperial gallons)

Apparent available supply	Measured portion of distribution	
(b) Imports for consumption	Crude oil not in natural state:  Imported	
1. Less than 500 gallons 2. Excluding Ontario.	(z) Apparent domestic consumption in- cluding waste	

TABLE 25. Commodity Statement for Gas (All Types)2, 1926

Apparent available supply	Measured portion of distribution		
(a) Production:  Natural gas	Natural gas:  (m,n) Used by non-industrial consumers in Ontario  (m,n) Used by non-industrial consumers in Alberta  Used in production of fuel or electricity:  Natural gas:  (p3) Natural gas industry  (p4) Oil wells  (p5) Manufactured gas:  Illuminating and fuel gas industry:  As fuel  For heating ovens or retorts  Coke and by-products industry  (chiefly as fuel)  Not specified:  (p6) Petroleum products industry  (p7) Central electric stations  (p8) Sub-total, used in production of fuel or electricity  (s) Gas, not specified, used by nonfuel producing manufacturers, as fuel  (r) Sub-total, gas used by non-fuel producing manufacturers, as fuel  (v) Natural gas used by private well owners in Ontario  (vv) Manufactured gas accounted for but not sold  (w6) Pipeline losses in Ontario  (x) Measured portion of domestic consumption  5, 779, 615  6, 000, 000  101, 020  956, 006  6, 410, 009  29, 929  54, 838  6, 410, 009  10, 859, 854  14, 846, 675  5, 080  14, 851, 755  74, 000  38, 722, 557		

TABLE 26. Commodity Statement for Natural Gas, 1929

(thousands of cubic feet)

Apparent available supply		Measured portion of distribution		
(a) Production	132,942	in Ontario	32 56 6, 244, 790 91	

TABLE 27. Cor modity Statement for Natural Gas, 1933

Apparent available supply		Measured portion of distribution		
(a) Production	23, 138, 103	(m,n) Used by non-industrial consumers in Ontario		
(d) Net imports ((b) - (c))	25, 819 23, 163, 922	Used for production of fuel or electricity:  (p3) Natural gas industry		
1. One quarter of exports in fiscal year ending 31 march, 1934. The sources were reports of the and Gas Inspection Division.	ending 31	as fuel		

TABLE.28. Commodity Statement for Natural Gas, 1939

Apparent available supply	Measured portion of distribution			
(a) Production	(m,n) Used by non-industrial consumers in Ontario			
(b) Imports for consumption 114,396	(m) Used by domestic consumers in Alberta 6,000,000			
(c) Exports (estimated) 1	(n) Used by commercial consumers in Alberta			
(d) Net imports ((b) - (c)) 19, 127	Used for production of fuel or electricity:			
(g) Net decrease in stocks: Alberta164, 629	(p3) Natural gas industry 155,500			
	(p4) Oil wells			
(h) Apparent available domestic sup-	(p6) Petroleum refineries, as fuel 1,559,740			
ply $((a) + (d) + (g))$	(p7) Central electric stations			
	(p) Sub-total, used for production of fuel or electricity			
	(s) Used by non-fuel producing man- ufacturers, as fuel			
	(t) Used by non-fuel producing mines, as fuel			
	(r) Sub-total, used by non-fuel pro- ducing manufacturers and mines, as fuel			
1. One quarter of exports in fiscal year ending 31 March 1939	(v) Used by private well-owners in			
plus three-quarters of exports in fiscal year ending 31	Ontario			
March 1940. The sources were reports of the Electricity and	(w6) Pipeline losses (Ontario) <sup>2</sup>			
Gas Inspection Division.  2. Includes some field operations. Excludes some unmetered waste in gathering system.	(x) Measured portion of domestic consumption			

TABLE 29. Commodity Statement for Manufactured Gas 1, 1929 (thousands of cubic feet)

Apparent available supply	Measured portion of distribution		
(a) Production:  Coke and gas plants	(p6) Petroleum products industry as fuel 3, 140, 336 (p) Sub-total, used for production of fuel and electricity 9,775,60	08	
1. Excludes blast furnace gas, of which iron and steel planused an estimated 17,331,687 thousand cubic feet.	(r) Sub-total, used by non-fuel producing manufacturers and mines as fuel	92	

TABLE 30. Commodity Statement for Manufactured Gas 1, 1933

(thousands of cubic feet)

Apparent available supply	Measured portion of distribution		
Still gas made in petroleum refineries 3,505,405  (h) Apparent available domestic supply	Used for production of fuel or electricity:  (p5) Coke and gas plants, as fuel		
1. Excludes blast furnace gas, of which iron and steel plants used an estimated 4,790,691 thousand cubic feet.	(x) Measured portion of domestic consumption		

TABLE 31. Commodity Statement for Manufactured Gas1, 1939

(wodout)	S Of Cubic Teet)
Apparent available supply	Measured portion of distribution
(a) Production:  Made by coke and gas plants	Used for production of fuel or electricity:  (p5) Coke and gas plants, as fuel 15,810,014
Still gas made by petroleum refineries 7,802,666  Oil (Pintsch) gas	(p6) Used in petroleum refineries (including still gas)
(h) Apparent available domestic supply	(p) Sub-total, used for production of fuel or electricity
	(s) Used by non-fuel producing man- ufacturers, as fuel
	(t) Used by non-fuel producing mines, as fuel
	(r) Sub-total, used by non-fuel producing manufacturers and mines, as fuel 20,149,293
	(vv) Accounted for but not sold
1. Excludes blast furnace gas, of which iron and steel plants used an estimated 28,279,752 thousand cubic feet, and central electric stations used 5,580,000 thousand. It is not	(wl) Railway car lighting
	(x) Measured portion of domestic consumption

TABLE 32. Commodity Statement for Coke (Other than Pitch Coke), 1926 (tons)

		_	
Apparent available supply	Measured portion of distribution		
(a) Production: Petroleum coke Other coke 51,545 2,027,058  (b) Imports for consumption: 988,034 Petroleum coke 674 Sub-total, imports 988, 708  (c) Exports 61,245 3  (d) Net imports ((b)-(c)) 927,463  (h) Apparent available domestic supply ((a)+(d)) 3,006,066	Used for production of fuel or electricity:  (p5) Illuminating and fuel gas industry: Coal coke for gas making 98, 200 Coal coke as fuel 49, 257 Coke and by-products industry: Coal coke as fuel 5, 687  (p6) Petroleum products industry 14, 722  (p8) Central electric stations 1  (p) Sub-total, used for production of fuel or electricity 16, 86  Coal coke used by non-fuel producing manufacturers, as raw material: Blast furnaces 2, 092 Other uses 214, 967 Petroleum coke used by non-fuel producing manufacturers, as raw material 22, 140  (q) Sub-total, coke used by non-fuel producing manufacturers, as raw material 1, 084, 580  (s) Coke, not specified, used by non-fuel producing manufacturers, as fuel 420, 288  (t) Coke, not specified, used by non-fuel producing mines, as fuel 4, 274  (u) Sub-total, all types used by non-fuel producing manufacturers and mines 1,509, 16		
of such batteries. 3. Of which, 41,699 tons were probably from coal, and the remainder probably petroleum coke.	mines		

TABLE 33. Commodity Statement for Coke (Other than Pitch Coke), 1929

(tons)

Apparent available supply	Measured portion of distribution		
(a) Production: Petroleum coke Other coke	Used for production of fuel or electricity:  (p3) Natural gas wells		

TABLE 34. Commodity Statement for Coke (Other Than Petroleum Coke or Pitch Coke), 1933 (tons)

Apparent available supply	Measured portion of distribution		
(a) Production       1,772,164         (b) Imports for consumption <sup>1</sup> 589,143         (c) Exports <sup>2</sup> 5,199         (d) Net imports ((b)-(c))       583,944	(m) Sales by producers to consumers for domestic use <sup>3</sup>		
(h) Apparent available domestic supply	Sub-total, used for production of fuel and electricity		
<ol> <li>Includes 77,122 tons imported by manufacturers for use in furnaces in manufacturing calcium carbide, or in metallurgical operations.</li> <li>An estimated 5,199 tons of coke from coal is included with the exports shown in <i>Trade of Canada</i>.</li> </ol>	(q) Sub-total used by manufacturing industry as raw material		
<ol> <li>An additional 198,686 tons were sold direct to consumers for other uses.</li> <li>Petroleum refineries used 27,349 tons of coke which included petroleum coke.</li> <li>May include some petroleum coke.</li> </ol>	(u) Sub-total, used by non-fuel producing manufacturers and mines 537, 626  (x) Measured portion of domestic consumption 1, 917, 151		

TABLE 35. Commodity Statement for Coke (Other Than Petroleum Coke or Pitch Coke), 1939 (tons)

		(	<u></u>				
Apparent available suppl	Apparent available supply		Measured portion of distribution				
	2, 410, 095 , 093	(m)	Sales by producers to consumers for domestic use <sup>2</sup>		313, 237		
(d) Net imports ((b)-(c))	463, 374	(p5)	Coke and gas plants: For gas making				
(h) Apparent available domestic supply ((a)+(d))	2, 873, 469	(p)	Sub-total, used for production of fuel and electricity	775, 869 4, 510 170, 416	238, 518		
		(q)	Sub-total, used by non-fuel producing manufacturers as raw material	950,795			
1. Includes 153,851 tons imported by manu	facturers, for use	(s)	Used by non-fuel producing manufacturers, as fuel <sup>4</sup>	443, 851			
in furnaces in manufacturing calcium carl or in metallurgical operations. 2. An additional 379,365 tons were sold d		(t)	Used by non-fuel producing mines, as fuel4	7,821			
for other uses. Sales by manufacturers to damounted to 772,709 tons.  3. Petroleum refineries used 4,232 tons of co	lealers, for resale,	(u)	Sub-total, used by non-fuel producing manufacturers and mines		1, 402, 467		
petroleum coke.  4. May include some petroleum coke.	, milon included	(x)	Measured portion of domestic consumption		1, 954, 222		

TABLE 36. Commodity Statement for Petroleum Coke, 1933 (tons)

Apparent available supply		Measured portion of distribution	
(a) Production	74,725 22,091 <b>96,816</b>	Used for production of fuel or electricity:  (p6) Petroleum refineries	20, 079 <sup>2</sup> 15, 795 35, 874

<sup>1.</sup> Exports of 21,576 tons as stated in Trade of Canada include an estimated 5,199 tons of coke from coal.

2. Made for own use. Coke consumed as fuel, including petroleum coke, amounted to 27,349 tons.

TABLE 37. Commodity Statement for Petroleum Coke, 1939 (tons)

Apparent available supply		Measured portion of distribution
(a) Production		(1) Deliveries for domestic heating
(d) Net imports ((b) - (c))	9	(q) Used by manufacturing industry as raw material 109,37 (x) Measured portion of domestic consumption 146,32
(g) Net decrease in stocks ((e) - (f)) (h) Apparent available domestic supply ((a) + (d) + (g))	50, 144 228, 562	

TABLE 38. Commodity Statement for Gasoline and Naphtha, 1926 (thousands of imperial gallons)

Apparent available supply Measured portion of distribution Used for production of fuel or electricity: 223, 798 (a) Production ..... 5 (p4) Oil wells ..... (b) Imports for consumption ..... 82,840 (p5) Illuminating and fuel gas industry: 76 as raw material ..... (p6) Petroleum products industry (made for (c) Exports (including re-exports)...... 3,868 own use) .. (p7) Central electric stations .....  $343^{1}$ 78,972 (d) Net imports ((b) - (c)) ..... (p) Sub-total, used for production of fuel or 456 electricity ..... (h) Apparent available domestic supply Used by non-fuel producing manufac-302,770 2,385 turers, as fuel ..... Used by non-fuel producing mines, as 447 (u) Sub-total, used by non-fuel producing manufacturers and mines 2 2,847 (w3) Estimated use by motor vehicles in Prince Edward Island, Nova Scotia, 1. Includes some kerosene. There may be some double-counting between (u) and (w3).
 Estimated use in Quebec in 1925 was 25,844 thousand gallons. Estimated use in New Brunswick in 1927 was Ontario, Manitoba, Alberta and Bri-188,562 tish Columbia 2,3 191,865 (x) Measured portion of domestic consumption 7,666 thousand gallons.

TABLE 39. Commodity Account for Gasoline and Naphtha, 1929 (thousands of imperial gallons)

Apparent available supply		Weasured portion of distribution
(a) Production	443, 890 170, 314 <b>614, 204</b>	(p1) Coal mines       10         (p3) Natural gas industry       —         (p4) Oil wells       45         (p5) Coke and gas plants, as fuel       3         (p6) Petroleum products industry (made for own use)       74         (p7) Central electric stations       109

TABLE 40. Commodity Account for Gasoline and Naphtha, 1933

(tho	usands	of	imperial	l gal	lons)	)
------	--------	----	----------	-------	-------	---

Apparent available supply		Measured portion of distribution				
(a) Production	45	56,956	/m1\	Used for production of fuel or electricity:	45	
(b) Imports for consumption	17,122			Coal mines  Natural gas industry	22	
(c) Exports	4,043			Oil wells  Coke and gas plants, as fuel	3	
(d) Net imports ((b)-(c))	1			Petroleum refineries: as fuel	155	
(h) Apparent available domestic supply (a) + (d))	47	70, 035	(p7)	Central electric stations	48	
			(p)	Sub-total used in production of fuel or electricity		279
			(p)	Used by non-fuel producing manufacturers, as raw material	4	
			(s)	Used by non-fuel producing manufacturers, as fuel	1,074	
			(t)	Used by non-fuel producing mines, as fuel	620	
			(u)	Sub-total, used by non-fuel producing manufacturers and mines		1,698
				Other gasoline accounted for: taxed other	423,849 54,437	
			(v)	Sub-total, other gasoline accounted for		478, 286
			(wl)	Used by railroads		661
			(X)	Apparent domestic consumption, net of waste		480, 924

TABLE 41. Commodity Account for Gasoline and Naphtha, 1939

(thousands of imperial gallons)

Apparent available supply			Measured portion of distribution	n	
(a) Production	748, 781 66, 626 -31, 953 783, 454	(p3) (p4) (p5) (p6) (p7) (p) (q) (s) (t) (u)	Used for production of fuel or electricity:  Coal mines  Natural gas industry  Oil wells  Coke and gas plants, as fuel  Petroleum refineries, made for own use.  Central electric stations  Sub-total used in production of fuel or electricity  Used by non-fuel producing manufacturers, as raw material  Used by non-fuel producing mines, as fuel  Sub-total, used by non-fuel producing manufacturers and mines  Other gasoline accounted for: taxed¹  other  Sub-total, other gasoline accounted for  Used by railroads; for locomotives and motor vehicles  other purposes  Sub-total, railroads	116 31 76 17 193 26 3 5,272 1,908	459 7,183 791,394
1. Probably used in motor vehicles.		(w5)	Air carriers (estimated)		3, 297 <b>804, 218</b>

TABLE 42. Commodity Statement for Other Petroleum Fuels, 1926

(Kerosene, Tractor Fuel, Diesel Fuel and Fuel Oils Nos. 1-6) (thousands of imperial gallons)

Apparent available supply		Measured portion of distribution				
(a) Production	102, 026 1, 585	286, 976 100, 441 387, 417	(p4) (p5) (p6) (p7) (p) (qq) (s) (t) (u)	Used in production of fuel or electricity: Natural gas industry	85 . 180 12,156 40,848 1,281 133 <sup>1</sup> 69,531 2,597	54, 550 72, 261 51, 062
1. Amount imported by mines for that purpo	ose.			tion		177, 873

## TABLE 43. Commodity Statement for Other Petroleum Fuels, 1929

(Kerosene, Tractor Fuel, Diesel Fuel and Fuel Oil Nos. 1 to 6)

(thousands of imperial gallons)

Apparent available supply	Measured portion of distribution			
(b) Imports for consumption	(m) Delivered for domestic and building heating 2.  Used in production of fuel or electricity:  (p1) Coal mines	52,080 84,661 93,649 64,823 4,307 157,885		
4. Use by locomotives amounted to 63,797 thousand gallons.	tion	457,405		

## TABLE 44. Commodity Account for Other Petroleum Fuels, 1933

(Kerosene, Tractor Fuel, Diesel Fuel and Fuel Oil Nos. 1 to 6)

(thousands of imperial gallons)

	ids of imperial garions)
Apparent available supply	Measured portion of distribution
(b) Imports       71, 901         (c) Exports (excluding re-exports)2       996         (d) Net imports ((b) - (c))       70         (e) Stocks at beginning of year       98, 999	(m) Delivered for domestic and building heating
<ol> <li>(h) Apparent available domestic supply         ((a) + (d) + (g))</li></ol>	(w3) Delivered for use as tractor fuel
thousand gallons.	(x) Apparent domestic consumption 520, 900

TABLE 45. Commodity Account for Other Petroleum Fuels, 1939

(Kerosene, Tractor Fuel, Diesel Fuel and Fuel Oil Nos. 1 to 6)

(thousands of imperial gallons)

Apparent available supply		Measured Portion of Distribution				
(a) Production	643,542 64,285 -17,904 689,923	(m) Delivered for domestic and building heating 161,"  Used in production of fuel or electricity:  (p1) Coal mines 47  (p3) Natural gas industry 5  (p4) Oil wells 623  (p5) Coke and gas plants:  For enriching water gas 4,029  Absorbing and wash oils 202  Fuel 93  (p6) Petroleum refineries (fuel only) 61,741  (p7) Central electric stations 8,107	705			
		(p8) Used for making Pintsch gas in misc. non-metallic mineral products	455			
		(qq) Used by mines for concentrating ores 48 <sup>1</sup> (s) Used by non-fuel producing manufacturers, as fuel				
		(u) Sub-total, used by non-fuel producing manufacturers and mines 144,9  Railroads; used by locomotives and rail motor cars 47,602 other uses 10,102	970			
1. Oil imported by mines for that purpose.		(w1) Sub-total, railroads57,°(w3) Delivered for use as tractor fuel37,°(w4) Delivered for bunkering204,°(x) Apparent domestic consumption682,1°	417 944			

TABLE 46. Commodity Statement for Fuelwood and Wood Waste Useable as Fuel, 1926 (cords)

Apparent available supply		Measured portion of distribution				
Fuelwood produced by:     Farm woodlots	606, 173	(p6) (p) (q)	Used for production of fuel or electricity: Oil wells	70 3 3,518 722,095 122,957	73 848, 570	
(h) Apparent available domestic sup-		(w1)	manufacturers and mines		38, 691 887, 334	

<sup>1.</sup> In addition, sawdust to the value of \$14,572 was imported.

TABLE 47. Commodity Statement for Fuelwood and Wood Waste Useable as Fuel, 1929 (cords)

Apparent available supply			Measured portion of distribution				
Fuelwood produced by: Farm woodlots Operations in the woods Sawmills Sub-total, fuelwood Mill waste: Slabs and edgings Hogged fuel and sawdust	136,803 1,631 9,680,393		(p3) (p4)	Used for production of fuel or electricity: Coal mines	2,008 18 624 11	2,661	
Sub-total, mill waste	494, 585 4, 960 31, 451	10, 174, 978	(t) (u)	Used by non-fuel producing manufacturers, as fuel Used by non-fuel producing mines, as fuel Used by non-fuel producing manufacturers and mines	655, 965 73, 117	730, 040	
(d) Net imports ((b) - (c))		-26,491	(w1)	Used as fuel by railroad locomotives		35,683	
( h) Apparent available domestic supply		10, 148, 487	(x)	Measured portion of domestic consumption		768, 384	

<sup>1.</sup> In addition, sawdust to the value of \$24,820 was imported.

TABLE 48. Commodity Statement for Fuelwood and Wood Waste Useable as Fuel, 1933 (cords)

Apparent available supply			Measured portion of distribution				
Fuelwood produced by: Farm woodlots Operations in the woods Sawmills Sub-total, fuelwood Mill waste: Slabs and edgings Hogged fuel Sawdust	39, 410 1, 100		1	Used for production of fuel or electricity: Oil wells Petroleum refineries Sub-total, used for production of fuel or electricity Used by manufacturing industry as raw material Used by non-fuel producing manufacturers, as fuel Used by non-fuel producing mines, as	, , , , , ,	110	
Sub-total, mill waste  (a) Sub-total, production  (b) Imports 1  (c) Exports  (d) Net imports ((b) - (c))  (h) Apparent available domestic supply	3,629 37,735	9,012,420 -34,106 8,978,314	(u) (w1) (x)	Sub-total, used by non-fuel producing manufacturers and mines  Used as fuel by railroad locomotives  Measured portion of domestic consumption	64, 191	6 14,000 10,443 624,553	

<sup>1.</sup> In addition, sawdust to the value of \$13,375 was imported.

TABLE 49. Commodity Statement for Fuelwood And Wood Waste Useable as Fuel, 1939 (cords)

Apparent available supply			Measured portion of distribution			
Sub-total, fuelwood	•	10,585,951	(p4) (p5) (p6) (p) (q)	Used for production of fuel or electricity: Natural gas industry 12 Oil wells 1,340 Coke and gas plants 3 Petroleum refineries 160 Sub-total, used for production of fuel or electricity	1,515	
(b) Imports for consumption	3, 863 <sup>1</sup> 69, 462	,	(t) (u)	Used by non-fuel producing mines, as fuel 97,984  Sub-total, used by non-fuel producing manufacturers and mines	575, 213	
(d) Net imports ((b) - (c))		- 65, 599 <b>10, 520, 352</b>		Used as fuel by railroads, for locomotives	8, 045 <b>584</b> , 773	

<sup>1.</sup> In addition, sawdust to the value of \$11,456 was imported.

TABLE 50. Commodity Statement for Electricity, 1926 (thousands of kilowatt hours)

Apparent available supply		Measured portion of distribution				
Electricity generated in Canada of which:  By central electric stations:  Generated by water	12, 127, 241 - 1, 500, 648 10, 626, 593	Used for production of fuel:  (p1) Coal mines				

<sup>1.</sup> Not comparable with figures in later series.

TABLE 51. Commodity Statement for Electricity, 1929

(thousands of kilowatt hours)

Apparent available supply			Measured portion of distribution				
Electricity generated in Canada of which:				Used for production of fuel or electricity:			
By central electric stations:			(p1)	Coal mines	149, 276		
Generated by water	17,693,621		(p3)	Natural gas industry	3		
Generated by fuel	268,894		(p4)	Oil wells	2,207		
By manufacturing industry for			(p5)	Coke and gas plants	40,191		
own use	1, 150, 974		(p6)	Petroleum products industry	27, 710		
By mining industry for own use By electric railways for own use	172, 724 225, 402		(p)	Sub-total, used for production of fuel or electricity		219,387	
(a) Sub-total, production		19, 511, 615	(s)	Generated for own use by non-fuel producing manufacturers	1, 083, 073 <sup>1</sup>		
(b) Imports	6,378		(t)	Used by non-fuel producing mines	634, 173		
(c) Exports	1,464,967		(u)	Sub-total, used by non-fuel producing manufacturers and mines		1, 717, 246	
(d) Net imports ((b) - (c))		-1,458,589	(w2)	Electric railways		527,670	
(h) Apparent available domestic			(w7)	Line loss on exports		46, 122	
supply ((a) + (d))		18, 053, 026	(x)	Measured portion of domestic consumption		2,510,425	

<sup>1.</sup> Excludes purchased electricity.

TABLE 52. Commodity Account for Electricity, 1933

(thousands of kilowatt hours)

(chousands of knowaw hours)									
Apparent available supply			Measured portion of distribution						
Electricity generated in Canada of which:  By central electric stations:				Free service (other than street lighting)		16,650 1,650,395			
Generated by water	17,006,069 332,921 1,241,400		(mn)	Other non-industrial uses: Commercial lighting Street lighting Sub-total	746,555 184,765	931,320			
By mining industry for own use By electric railways for own use (a) Sub-total, production	106,096	18,696,264		Used for production of fuel:  Coal mines  Natural gas industry	134,301				
(b) Imports	3, 195 931	10,000,201	(p5)	Oil wells	3,308 23,046 51,219				
(d) Net imports ((b) - (c))		2, 264	(p)	Sub-total used for production of fuel or electricity	01,210	211,885			
(h) Apparent available domestic supply ((a) + (d))		18, 698, 528	(w2)	Used by non-fuel producing manufacturers Used by non-fuel producing mines Electric railways Line losses		10, 938, 650 605, 511 446, 432 3, 593, 698			
			(x)	Apparent domestic consumption		18, 394, 541			

TABLE 53. Commodity Account for Electricity 1939

(thousands of kilowatt hours)

		(**************************************					
Apparent available supply			Measured portion of distribution				
Electricity generated in Canada of which:  By central electric stations:			(m)	Free service		17, 136 2, 310, 891	
Generated by fuel  By manufacturing industry, for	27, 829, 017 509, 013			Commercial lighting  Street lighting  Used for production of fuel		1, 109, 008 204, 088	
By mines, for own use	2, 357, 669 262, 161 9, 100		(p3)	Coal mines  Natural gas industry	180, 875		
(a) Sub-total, production	4,236	30, 966, 960	(p5)	Coke and gas plants  Petroleum refineries	1, 980 41, 351 62, 061		
(c) Exports	1,918,630	.1 014 204	(6)	Sub-total, used for production of fuel		286, 284	
(d) Net imports ((b) - (c)		-1,914,394 29,052,566	(t)	Used by non-fuel producing manufacturers	19,327,021 1,578,468		
				Sub-total, used by non-fuel producing manufacturers and mines  Electric railways		20, 905, 489 348, 545 2, 993, 093	
			(x)	Apparent domestic consumption		28, 174, 534	

#### **APPENDIX**

#### NOTES ON COMMODITY ACCOUNTS AND STATEMENTS FOR 1926, 1929, 1933 and 1939

#### Coal

- 1. Tables 17 to 20 give commodity statements for coal. The two sides, which were computed independently, balance within 33.6 per cent for 1926. 33.3 per cent for 1929, 40.2 per cent for 1933, and 37.4 per cent for 1939.
- 2. The figures for production (a) and landed imports (b) are from *Coal Statistics for Canada*. The landed import figures were collected by a different method from that used for the 1948 and 1952 surveys 1. They also include briquettes, whereas the later surveys did not. Exports (c) are from *Trade of Canada*. The imputed decrease of stocks held in bond (g) was calculated as the excess of imports for consumption, obtained from *Trade of Canada*, over landed imports. The resulting domestic supply (h) is the same as if imports for consumption had been used at (b). This indirect approach was used to maintain as much consistency as possible with the series for 1948 and 1952.
- 3. On the distribution side, coal supplied to employees of coal mines (k), use in coal mines (p1) and briquette plants at mine (p2), sales for ships' bunkers (w4) and waste (y) are from Coal Statistics for Canada. Waste consists of the excess of coal put on waste heaps at the mine over coal taken off. Use by the natural gas industry (p3) and oil wells (p4) are from Mineral Production of Canada, as is use by non-fuel producing mines (t). Although the amount of coal used by briquette plants at the mines is known, the production of briquettes at all plants is not. Therefore, no separate tables were compiled for briquettes.
- 4. Use in 1926 by the coke and by-products industry and the illuminating and fuel gas industry (p5) and by the petroleum products industry (p6) are from Manufactures of the Non-Metallic Minerals in Canada. Use in later years by coke and gas plants (p5) is from The Coke and Gas Industry in Canada. These data are directly comparable with those for 1926. Use by the petroleum products industry (p6) in 1929 and by petroleum refineries (p6) in 1933 and 1939 is from The Petroleum Products Industry in Canada. The data for 1933 and 1939 are not directly comparable with those for 1926 and 1929 since the petroleum products industry includes the manufacture of lubricating oils and greases. However, in 1926, the selling value of products of this additional section of the industry was less than one per cent of the total. The figures for (p5) and (p6) for the three later years are also given in Manufactures of the Non-Metallic Minerals in Canada.
- 1. See Energy Sources in Canada; Commodity Accounts for 1948 and 1952,

- 5. Use by central electric stations (p7) is from Central Electric Stations in Canada. Use by railroads for locomotives (w1) is from Steam Railways of Canada. No deduction has been made for use by Canadian railroads in the U.S.A. The figures are therefore not strictly comparable with those for use by locomotives in 1948 or 1952, but any difference is not likely to be significant. Use by railroads for other purposes in 1939 was obtained by a special computation from existing schedules. Use as fuel by non-fuel producing manufacturers (s) is based on totals in The Manufacturing Industries of Canada, less use as fuel by coke and gas plants and by petroleum refineries. Use as raw material (q) is from worksheets.
- 6. Care should be taken in interpreting these figures, since they only show that part of a concept which was actually measured. On the supply side, production, imports and exports are fully covered, but the inventory data are incomplete. On the distribution side, use by producers of fuel and electricity is fully covered, as is use by other manufacturers and mines. Use by railroads covers only use by locomotives, and the figures for ships' bunkers cover only direct sales by mines, and so leave out inland bunkering. The biggest gap is in use by households, and trading establishments. Within this field, only sales by mines to their employees are covered. Sales by mines direct to consumers other than employees, and sales by retail fuel dealers, were published for the first time in 1947.

#### Crude Petroleum

- 7. Tables 21 to 24 give commodity accounts for crude petroleum. The two sides, which were computed independently, balance within 4.1 per cent for 1926, 0.4 per cent for 1929, 3.4 per cent for 1933, and 0.8 per cent for 1939. In 1926 and 1933, use accounted for exceeded the supply apparently available.
- 8. Data on production (a) are from Mineral Production of Canada. Imports (b) and exports (c) are from Trade of Canada. Use at petroleum refineries (p6) is from Manufactures of the Non-Metallic Minerals in Canada for all years, and repeated in The Petroleum Products Industry in Canada for 1929, 1933 and 1939. Evaporation (x) in 1939 was computed from worksheets.

#### Gas

9. Table 25 is a commodity statement which consolidates natural gas with manufactured gas (other than blast furnace gas) for 1926. The measured portion of consumption fell short of the apparent domestic supply by 26.7 per cent.

10. Production of natural gas was obtained from Mineral Production of Canada. Production of manufactured gas is from Manufactures of the Non-Metallic Minerals in Canada. Imports for consumption (b) are from Trade of Canada.

11. Natural gas used by the natural gas industry (p3) and by oil wells (p4) is from Mineral Production of Canada, as is the figure for gas, not specified, used by mines (t). Manufactured gas used by the illuminating and fuel gas industry, and by the coke and by-products industry (p5) is from Manufactures of the Non-Metallic Minerals in Canada, as is the gas, not specified, used by the petroleum products industry (p6) and the manufactured gas accounted for but not sold (vv). Central Electric Stations in Canada provided data on gas, not specified, used in that industry (p7). Gas used by non-fuel producing manufacturers as fuel (s) was derived from various sources. Blast furnace gas used by iron and steel works was eliminated as far as possible. Figures on natural gas used by private well owners in Ontario (v), and pipeline losses in that province (w6) were obtained from the Annual Report of the Ontario Department of Mines, 1927, as was use by nonindustrial consumers (m, n). Data on use by domestic and commercial consumers in Alberta (m, n) were supplied by the Petroleum and Natural Gas Conservation Board of Alberta.

12. The table is not directly comparable with the tables for 1948 and 1952 in Reference Paper No. 69, because waste gas is not included with production. The amount is not known.

#### **Natural Gas**

13. Tables 26, 27 and 28 consist of statements for natural gas in 1929, 1933 and 1939. Measured consumption fell short of the apparent supply by 6.2 per cent in 1929, 14.1 per cent in 1933, and by 10.0 per cent in 1939.

14. The figure for production (a) is from Mineral Production of Canada. Since it does not include gas wasted, it is not comparable with figures used in the study for 1948 and 1952. Figures for use in natural gas wells (p3), in oil wells (p4), and in nonfuel producing mines (t) are also from Mineral Production of Canada. Imports (b) are from Trade of Canada, and exports (c) were estimated for 1933 and 1939 on the basis of reports of the Electricity and Gas Inspection Division. Use by petroleum refineries (p6) is from Manufactures of the Non-Metallic Minerals, and also The Petroleum Products Industry in Canada. Use by central electric stations (p7) is from Central Electric Stations in Canada. Use by non-fuel producing manufacturers (s) is based on totals in The Manufacturing Industries of Canada, less use as fuel by petroleum refineries. Use by private well owners in Ontario (v) and pipeline losses in that province (w6) are from the Annual Report of the Ontario Department of Mines for 1930, 1936 and 1940, as is use by non-industrial consumers (m, n) Data on use by domestic and commercial consumers (m, n) in Alberta were supplied by the Petroleum and Natural Gas Conservation Board of Alberta.

### Manufactured Gas (Excluding Blast Furnace Gas)

15. Tables 29, 30 and 31 give statements for manufactured gas in 1929, 1933 and 1939. The two sides, which were computed independently except for one minor item, balance within 41.1 per cent for 1929, 43.4 per cent for 1933, and 11.0 per cent for 1939.

16. Production (a) by coke and gas plants is from Manufactures of the Non-Metallic Minerals in Canada, as is use by coke and gas plants as fuel (p5), and gas accounted for but not sold (vv). For 1933 and 1939 these data are also published in The Coke and Gas Industry in Canada. Production of still gas by petroleum refineries is from Manufactures of the Non-Metallic Minerals in Canada, as is use in the petroleum products industry (p6) in 1929 and in petroleum refineries (p6) in 1933 and 1939. These data are also published in The Petroleum Products Industry in Canada. Production of Pintsch gas in 1939 is from Miscellaneous Non-Metallic Mineral Products Industry. Use by non-fuel producing manufacturers (s) is from various sources. Use by nonfuel producing mines (t) is from Mineral Production Statistics. Use of Pintsch gas for railway car lighting (w1) in 1939 is estimated as being equal to production.

## Coke (Other than Pitch Coke)

17. Tables 32 and 33 are statements for coke (all types) in 1926 and 1929. Measured consumption fell short of apparent available supply by 44.2 per cent in 1926 and by 56.9 per cent in 1929.

18. Production (a) is from Manufactures of the Non-Metallic Minerals in Canada, as is use by the producing industries (p5), and by the petroleum products industry (p6). Imports (b) and exports (c) are from Trade of Canada. Manufactures of the Non-Metallic Minerals in Canada contains estimates that exports included 41,699 tons of coke from coal in 1926, and 25,208 tons in 1929. These estimates were based on the study of original documents, the criterion being price. Use by central electric stations (p8) is from Central Electric Stations in Canada. Use as raw material in blast furnaces and steel furnaces is from Iron and Steel and Their Products in Canada, and other uses as raw material are from worksheets. Use by non-fuel producing manufacturers (s) is based on totals in The Manufacturing Industries of Canada, less fuel used in gas making and in the petroleum products industry, and use by non-fuel producing mines is from Mineral Production of Canada.

19. The figures probably represent the full supply of coke, and the full distribution for the concepts stated.

No information is available on inventories, and one major gap on the distribution side is use by domestic consumers and the service trades.

#### Coke (Other Than Petroleum Coke or Pitch Coke)

- 20. Tables 34 and 35 are statements for coke (other than petroleum coke or pitch coke) for 1933 and 1939. Measured distribution fell short of apparent supply by 18.7 per cent in 1933, and by 32.0 per cent in 1939.
- 21. Data on production (a) are from The Coke and Gas Industry in Canada, as are those on sales by producers to domestic consumers (m) and use in coke and gas plants (p5). Imports (b) are from Trade of Canada. Exports (c) for 1933 are based on an estimate published in The Coke and Gas Industry in Canada 1933. This estimate was based on a study of original documents, the criterion being price. Exports (c) for 1939 are from Trade of Canada. Use in blast furnaces and steel furnaces (q) is from The Primary Iron and Steel Industry in Canada. Other use as raw materials (q) is from a variety of sources. Use as fuel by non-fuel producing manufacturers (s) is based on totals in The Manufacturing Industries of Canada, less fuel used by coke and gas plants. Use by non-fuel producing mines (t) is from Mineral Production of Canada.
- 22. The figures probably cover the full amounts of the concepts stated. The apparent available supply is a firm figure, except for the absence of inventory data. On the distribution side, no information is available about sales by retail fuel dealers. Use as fuel by manufacturers (s) and mines (t) may include some petroleum coke.

#### Petroleum Coke

- 23. Tables 36 and 37 give commodity statements for petroleum coke in 1933 and 1939. Measured consumption fell short of the apparent supply by 62.9 per cent in 1933 and by 36.0 per cent in 1939.
- 24. Production (a) for both years, and inventory data (g) for 1939 are from The Petroleum Products Industry in Canada. Imports (b) are from Trade of Canada. Exports (c) for 1933 consist of the Trade of Canada total for coke, less an estimated 5,199 tons of coke from coal. Exports (c) for 1939 are from Trade of Canada. Use in petroleum refineries (p6) for both years, and deliveries for domestic heating (i) in 1939 are from The Petroleum Products Industry in Canada. Use as a raw material (q) is from worksheets.
- 25. The supply side of the statement is probably reliable for 1939. It is not clear why the distribution side falls short in both 1933 and 1939. The fact should not be overlooked that use of coke by manufacturers and mines was collected on schedules which did not differentiate between types of coke. It is also possible that use as a raw material was understated.

#### Gasoline and Naphtha

- 26. Table 38 gives a commodity statement for gasoline and naphtha in 1926, and tables 39 to 41 give commodity accounts for 1929, 1933 and 1939. In 1926, the measured portion of distribution fell short of the apparent available supply by 36.6 per cent. In 1929, apparent consumption fell short of the apparent supply by 2.1 per cent, In 1933 apparent consumption exceeded the apparent supply by 2.3 per cent, and in 1939 it exceeded it by 2.7 per cent.
- 27. Production (a) and use in the petroleum products industry (p6) in 1926 and 1929, and in refineries (p6) in 1933 and 1939 are from Manufactures of the Non-Metallic Minerals in Canada. For the three later years, these data are also obtainable from The Petroleum Products Industry in Canada. They exclude absorption gasoline used, as this is classified as crude petroleum for this study. Imports (b) and exports (c) are from Trade of Canada. Use by the natural gas industry (p3) and oil wells (p4) are from Mineral Production of Canada, as is use as fuel by non-fuel producing mines (t). Use by the illuminating and fuel gas industry (p5) in 1926, and by coke and gas plants (p5) in 1929, 1933 and 1939, is from Manufactures of the Non-Metallic Minerals in Canada, the figures for 1933 and 1939 being repeated in The Coke and Gas Industry in Canada. Central Electric Stations in Canada contains data for that industry (p7). Use as raw material (q) is from worksheets. Use by non-fuel producing manufacturers as fuel (s) is based on totals in The Manufacturing Industries of Canada, less use by coke and gas plants and by petroleum refineries. Use by railroads (w1) in 1933 is from Steam Railways of Canada. Use by railroads for locomotives and motor vehicles (w1) in 1939 is from Steam Railways of Canada, and use for other purposes from unpublished material. Use by air carriers (w5) in 1939 is an estimate.
- 28. The remaining items on the distribution side differed substantially during the four years. In 1926 the estimated use by motor vehicles in six provinces (w3) was obtained from *The Highway*, the Motor Vehicle and the Tourist in Canada. This was added to the previous items, to give the measured portion of distribution (x).
- 29. In 1929 the estimated use by motor vehicles (w3) was obtained from *The Highway and The Motor Vehicle in Canada*. Apparent domestic consumption net of waste (x) was obtained by using the figure for consumption of gasoline in Canada given in *Manufactures of the Non-Metallic Minerals in Canada*. From domestic consumption (x) was deducted the sum of all other measured items to leave the amount of other gasoline accounted for (v).
- 30. In 1933 and 1939 apparent consumption, net of waste (x) was estimated by deducting from gross sales of gasoline, as recorded in *The Highway and the Motor Vehicle in Canada*, the amount of exports recorded in *Trade of Canada*. From this was deducted the sum of all other measured items, to give the

amount of other gasoline accounted for (v). The amount of taxed gasoline was deducted from this, to leave a residual of gasoline untaxed and accounted for, but with its precise application unknown. In so far as the other totals accounted for included taxed gasoline, the figure for the taxed portion of other gasoline accounted for will be too large, and the untaxed portion correspondingly too small. The subtotal (v), however, will not be affected by double-counting. The taxed gasoline is probably that which was used by motor vehicles. In 1926 the figure for use by motor vehicles was estimated on this assumption by the Department of Railways and Canals.

#### Other Petroleum Fuels

31. Tables 42 and 43 give statements for petroleum fuels other than gasoline, naphtha, and petroleum coke for 1926 and 1929, and tables 44 and 45 give commodity accounts for 1933 and 1939. The measured portion of distribution fell short of the apparent available supply by 54.1 per cent in 1926, and by 23.4 per cent in 1929. Apparent consumption fell short of apparent available supply by 5.6 per cent in 1933, and by 1.1 per cent in 1939.

32. Production (a) is from Manufactures of the Non-Metallic Minerals in Canada, and The Petroleum Products Industry in Canada also shows production for 1929, 1933 and 1939. Imports (b) and exports (c) are from Trade of Canada. Inventories (g) for 1933 are from Petroleum Fuels in Canada, 1927-1940, published by the former Department of Mines and Resources. It gives inventories only from 1930 on. Inventories held in refineries, warehouses and consumers' storage (g) for 1939 are from The Petroleum Products Industry in Canada.

33. On the distribution side, use in the petroleum products industry (p6) for 1926 and 1929, and in petroleum refineries (p6) for 1933 and 1939 is from the same sources as production. Use by coal mines (p1), the natural gas industry (p3), oil wells (p4), and non-fuel producing mines (t) is from Mineral Production of Canada. Use by mines for concentrating ores (qq) is assumed to be equal to the amount imported for that purpose. Use by the illuminating and fuel gas industry (p5) in 1926 is from Manufactures of the Non-Metallic Minerals in Canada. Use by coke and gas plants (p5) in the other three years is from The Coke and Gas Industry in Canada. Use by non-fuel producing manufacturers as fuel (s) is based on totals given in The Manufacturing Industries of Canada, less amounts used as fuel by coke and gas plants, and by petroleum refineries. Deliveries for domestic and building heating (m) for 1929 and 1933 are from Petroleum Fuels in Canada 1927-1940; and for 1939 from The Petroleum Products Industry in Canada. The 1929 figure excludes kerosene. Use by railways for locomotives (w1) is from Steam Railways of Canada for all years. Deliveries for use by railways in 1929 and 1933 (w1) are from Petroleum Fuels in Canada 1927-1940. These figures were used for these years, as being more inclusive than use by locomotives alone. Other uses by railways (w1) in 1939 were calculated from unpublished data. Deliveries for use as tractor fuel (w3) for 1929 and 1933 are from Petroleum Fuels in Canada 1927-1940. Deliveries for 1929 exclude kerosene. Deliveries for bunkering (w4) in 1929 are from the same publication. Deliveries for use as tractor fuel (w3) in 1939, and for ships' bunkers (w4) in 1933 and 1939, are from The Petroleum Products Industry in Canada.

#### Fuelwood and Wood Waste Useable as Fuel

34. Tables 46 to 49 consist of commodity statements for fuelwood and wood waste useable as fuel. The measured portion of distribution fell short of the apparent supply by 90.8 per cent in 1926, 92.4 per cent in 1929, 93.1 per cent in 1933, and 94.4 per cent in 1939.

35. Data on production (a) were prepared by the Forestry Section on the basis of available schedules and worksheets. Imports (b) and exports (c) are from Trade of Canada. Use in the production of natural gas (p3) and crude oil (p4) are from Mineral Production of Canada, as is use by non-fuel producing mines (t). Use by the petroleum products industry (p6) in 1926 and 1929 is from Manufactures of the Non-Metallic Minerals in Canada, and use by petro-leum refineries (p6) in 1933 and 1939 is from that publication and The Petroleum Products Industry in Canada. Use by coke and gas plants (p5) in 1939 is from The Coke and Gas Industry in Canada. Use as raw material (q) is from worksheets. Use by non-fuel producing manufacturers as fuel (s) is based on totals in *The Manufacturing Industries of Canada*, less use by coke and gas plants and petroleum refineries. Use as fuel by railroad locomotives (w1) is from Steam Railways of Canada.

#### Electricity

36. Tables 50 and 51 give commodity statements for electricity in 1926 and 1929, and tables 52 and 53 give commodity accounts for 1933 and 1939. In 1926, the measured portion of distribution fell short of the apparent supply by 67.7 per cent, and in 1929 by 86.1 per cent. In 1933 the account balanced within 1.7 per cent, and in 1939 within 3.0 per cent.

37. Electricity generated by central electric stations is from *Central Electric Stations in Canada*. Figures on electricity generated by manufacturing industry and mines for their own use in 1929, 1933 and 1939 are from worksheets maintained in the Industry and Merchandising Division. Data on power generated by electric railways for their own use, and on power used by them (w2) are from worksheets of the Public Finance and Transportation Division. Imports (b) and exports (c) are from *Trade of Canada*.

38. Use by coal mines (p1) and by natural gas (p3) and petroleum wells (p4) is from Mineral Production of Canada, as is use by non-fuel producing mines (t). Use in the manufacture of coke and gas (p5) and of petroleum products (p6) is from Manufactures of the Non-Metallic Minerals in Canada. The data were also available in The Coke and Gas Industry in Canada for coke and gas in 1933 and 1939, and in The Petroleum Products Industry in Canada for petroleum products in 1929, 1933 and 1939. Use by non-fuel producing manufacturers (s) in 1929, 1933 and 1939 is based on totals given in The Manufacturing Industries of Canada, less use in the manufacture of

gas and of petroleum products. For 1926 use by those non-fuel producing manufacturers for which information is available was taken from sundry publications of the year's Census of Industry. Line loss (w7) for 1933 and 1939 is from Central Electric Stations in Canada. For 1926 and 1929 line loss is known for exports only, and this was obtained from the same publication.

39. For 1933 and 1939 data on free service (1), residential use (m), and other non-industrial uses (mm) were obtained from *Central Electric Stations in Canada*.



